



POLÁNYI CENTRE PUBLICATIONS

Advanced Research on the Global Economy
Transnational Economies and Management

II.2016/WP03

iASK WORKING PAPERS
2016

Transnational Economies and Management

Abstracts and About the Authors

Abstracts

Transnational Economies and Management: Progress - and Regress - in Change Management in Health Services, Stuart Holland and Teresa Carla Oliveira

'Change management' can have progressive resonance, and substance. Thus the New Deal of Franklin Delanore Roosevelt changed the management of the US economy rescued it from The Depression and restored faith in American democracy. Yet change also can be regressive as the chapter submits has been the case with so called New Public Management in health services in the UK and especially when its implicit economic logic is gaining cost savings through Fordist economies of scale. By contrast, as shown in the chapter from the case of a major teaching hospital in Sweden change management can gain both economic efficiency and social efficiency, where the latter means enhanced wellbeing for the public by post-Fordist economies of scope or doing more *with* the same, including the skills and experience of health workers, rather than more *of* the same as in seeking only cost reductions by economies of scale. The chapter also draws on the concept of innovation-by-agreement recommended by one of us to, and endorsed in, The Lisbon Agenda 2000.

Locational advantages within production networks of transnational corporations and the role of industrial clusters, Anikó Magasházi

The paper connects the research area of global developments, Global Value Chains/ Global Production Networks with localized/regional developments of industrial clusters to investigate how to be successful with local merits within the new world economic structure, where majority of trade and investment relations are concluded within transnational corporations' network. The East Asian countries, having the longest experience of development within cross-border production networks, first gave their local – by now increasingly regional answers with industrial clusters formed by private initiatives and consciously supported by national and regional governments. This set out a clear "high road" economic development strategy, with less government interference but still with broad-based support characterizing European best practices: in Ireland and in Austria. Hungary's 25 years' inclusion in global production networks and 15 years of existence of clusters offer both statistical and empirical results of the development. The paper offers policy recommendations on how to catch up with the European champions and suggestions to keep this target as a priority agenda in the regional economic development.

Examining Meso Corporations: Recent Status and trends in the world of the top Meso corporations, Andrew Black

The purpose of this paper is to look at an important sample of meso corporations, namely the very largest of them all. The top 100 non financial meso corporations are examined, together with a smaller number of top financial meso corporations. The overall sample is around 130 entities in size, with small variations depending on the year. The core group of non-financial corporations always consists of 100 companies. The analysis of the top 100 corporations is similar in scope to asking the question, who are those people sitting in the first class compartment of a train, or who are occupying the executive lounges in a top grade global airport. All the comparisons refer to the select group of the top 100 meso corporations, and information is shown on which economic sectors they are active in, what parts of the world they are based in, and how this changed since 2003. The aim is to consider what changes have been occurring in this select group of large, global, corporations.

About the Authors

Stuart Holland studied and taught history and political theory at Oxford, then became an adviser to British Prime Minister Harold Wilson on European affairs. In 1967 he gained the consent of Charles De Gaulle for a second British application to join the European Community on the basis of a confederal Europe, mutual currency support and a European Technology Community. Resigning from no. 10 when Wilson did not follow this through, he finished an economics doctorate at Oxford and taught at Sussex University. From 1979 to 1989 he was a Labour Member of Parliament and then worked with Jacques Delors on EU policies for economic and social cohesion, including the recommendation of Eurobonds as a solution to the Eurozone crisis on the model of the Roosevelt New Deal. He has published papers and books on economic theory, social and political theory, public enterprise, planning, regional policy, economic integration, international development and global economic governance.

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Progress - and Regress - in Change Management in Health Services

Stuart Holland and Teresa Carla Oliveira¹

Introduction

Throughout Western Europe there is increasing demand for health services with ageing populations at the same time as governments are seeking to reduce the costs of health provision. Implicit within this are different paradigms of health and hospital organisation, different institutional logics, and different perceptions of change at different management levels. There also is a presumption in some European countries that the New Public Management reforms in the UK NHS (and, since devolution, in England) offer a template for change management.

There is less awareness outside the UK that these have revealed conflicting rationalities between government insistence on more market criteria in health provision and opposition to this from health professionals, or that criticism of the reforms for lack of consultation on how they have been introduced has been persistently voiced by the British Medical Association, the Royal Colleges of Nurses; the Royal College of General Practitioners and the Royal College of Midwives (Pollock, 2004; Leys & Player, 2011; Warwick, 2012; Laja, 2012).

The explicit logic of the reforms had been to devolve responsibility for costs and performance and increase efficiency by introducing market criteria or 'quasi-markets' into the NHS as well as out-sourcing some services. But their implicit logic has been Weberian in terms of pyramidal top-down authority, Fordist in its preoccupation to increase patient throughput to reduce unit costs, and Taylorist in terms of constant

¹ This paper is a chapter from *Change Management – What Went Right, What has Gone Wrong and How to Learn Up* – by Teresa Carla Oliveira of the Faculty of Economics of the University of Coimbra and Stuart Holland, ISES Senior Fellow, with scheduled publication in the autumn of 2016.

surveillance of performance criteria. While the outcome of increased layers of supervision has not reduced, but trebled administrative costs as a share of total costs from under 5% to over 14% (Taylor, 1911; Leys & Player, 2011).

This is not to imply that the case for reforms in health organisation in the UK or elsewhere lacks justification. Health provision can be compromised by organisational inefficiency, including under-utilisation of capacity and skills; lack of 'patient path planning', and therefore failure to reduce waiting time for patients from lack of integration of diagnosis and treatment; lack of retraining for nursing staff, lack of internal 'voice' (Hirschman, 1970) for both nursing and other staff on feasible gains in efficiency, as well as stress from overwork and absenteeism. But only some of these have been redressed by the New Public Management reforms in the UK and, after devolution for Scotland and Wales, the English National Health Service.

This chapter addresses such issues not only because of extensive failures in terms of change management in the NHS reforms, but also the degree to which this relates to de-legitimation of the democratic process. For many of the reforms did not concern legislation proposed to parliament and submitted to committee scrutiny but were introduced without primary legislation. What started as a case for market criteria to increase efficiency changed to a design to privatise the NHS. As Leys and Player (2011) have well chronicled, this began under New Labour from 2000. But then was followed by the Liberal Party, which had included a commitment in its 2010 election manifesto to reverse 'top down' market reforms of the NHS, when in coalition government, it supported them.

The chapter then reports on a counter case of change management in the Karolinska teaching hospital in Stockholm that was inspired by its manager, Jan Lindsten, who was familiar with the distinction between Fordist economies of scale – more of the same - and

post Fordist economies of scope – more with the same. Lindsten applied this at Karolinska with dramatic results, reducing costs by 15% rather than increasing them as in the British NHS reforms, and increasing patients treated by 20%. This involved a challenge to the interests of some health professionals such as consultants and other doctors, as in requiring multiple use of operating theatres and wards, and by transferring control of ‘patient path planning’ to senior nurses. Yet which doctors came to accept when the time saving meant that they could have one day a week free from diagnosing or treating patients for research (Kaplinsky, 1995).

Part of the agenda of the chapter is to address issues of both economic and social efficiency in health and hospital organisation, where social efficiency means a service which can enhance patient wellbeing - such as reduction of waiting time for operations - and also can respect the commitment of employees to healthcare as a value based vocational commitment. The concept of social efficiency is consistent with the claims of Womack, Jones and Roos (1990) and Womack and Jones (1996) on ‘lean production’ and reducing wasted time in addressing patient needs. Kaplinsky (1995) also drew on the ‘lean production’ production model in a study of effective change management at the Karolinska teaching hospital.

Inversely, with pressure to reduce costs and increase patient turnover, health professionals are increasingly under stress. The chapter submits that conflicts between economic efficiency and social efficiency can be resolved in a symbiotic manner in which not only the interests of patients, but also the wellbeing of health professionals, can be reconciled. It relates this to the concept of innovation-by-agreement, including the right for work-life balance, proposed by one of us for, and endorsed by, The Lisbon Agenda 2000 of the European Council. This also has been elaborated in terms of both efficient economies and efficient societies by Holland (2015).

Fordist Production and Weberian Hierarchy

The National Health Service introduced in the UK by the postwar Labour government was driven by social rather than market values, and its explicit logic was that the service would deliver health care financed by taxation but free at the point of use. Aneurin Bevan, as Secretary of State for Health, and who managed the Herculean task of introducing the NHS within three postwar years in a climate of economic austerity, related it to a social philosophy in which he observed that self-interest was less typical of the human condition than concern for others either within a family or in groups, which also had been observed by Darwin to be one of the reasons why humankind itself successfully evolved (Bevan, 1952; Darwin, 1859).

But there are underdrawn parallels between the British NHS as introduced in 1948 and Henry Ford's initial ambitions as a social engineer (Lacey, 1987). Ford's social philosophy was that everyone, rather than a privileged few, should have access to reliable and high quality personal transport. The commitment of the postwar Labour government was that everyone should have reliable access to a high quality health service. There also were other similarities with Fordism in the early NHS, even if these only later were explicitly problematic. Fordism depended very much on stable technologies to achieve standardised production. So did the NHS. Hip and heart transplants and a host of entirely new medical techniques were unknown at the time.

Geometric progress in medical techniques and health technology in due course were to increase demand for diversified rather than general health services, while the very success of Labour's postwar welfare state, which the Conservatives until the 1970's did not risk challenging, meant improvements in nutrition, housing and other social services which lengthened life expectancy and therefore the volume demand on the NHS. This was

paralleled in other countries which introduced national health systems, such as Portugal after its 1974 revolution restoring democracy, which thereby, on the same principles of service according to need, within three decades increased life expectancy by 15 years (Oliveira & Holland, 2007).

The postwar British NHS also embodied an implicit, if mainly benign, authoritarianism. Unless they could pay for private provision, people got the health system the NHS could deliver. They had little option on when they would be treated or by whom, or how. Even if the social value principle remained that they would get the best of what medical practice available, this differed between teaching hospitals in metropolitan areas which were at the frontier of medical innovation, and gained preferential funding, and general hospitals elsewhere which could in due course learn from them, but were less privileged.

The social efficiency of the initial NHS therefore varied. Its structures were hierarchical and Weberian. There were 'baronies' within it in which heads of departments could, sometimes jealously, defend their own autonomy. Bevan also was strenuously opposed in introducing the NHS by the British Medical Association and admitted that he won by 'stuffing their mouths with gold'. Many hospital managers also now admit that gaining a balance between economic efficiency and social efficiency in terms of patient needs is difficult to achieve. Too often procedures can be perceived by both staff and patients to be inflexible. Especially, in a Fordist paradigm of health organisation, there is a tendency to fit the patients into the production schedules of health provision rather than fit the production schedules to the needs of patients.

Further, the organisation of most hospitals reflects the multi-divisional model by which Sloan at General Motors overcame Ford's own refusal to delegate (Lacey, 1987). Just as large companies are organised in production, finance, marketing, sales and other

divisions, so hospitals are organised in departments. Each department in a hospital tends to have its own operating theatre, its own diagnostic unit, its own wards, its own nursing and other technical medical staff as well as, in teaching hospitals, their own research units.

Moreover, while Ford endorsed Taylor's task specialisation for line workers, nurses and other line workers in hospitals are multi-tasked and need to be multi-skilled. With only a few exceptions, such as anaesthetics, specialisation in hospitals tends to be intra-departmental. Gynaecology and cardiac surgery may share some techniques and technologies, but are not identical. Their specialists need to be near the frontier of knowledge in their area. In a teaching hospital, they will be on or advancing the frontier of best practice. But while such specialisation is needed to assure professional success it may outcome in inertial institutional logics and deny a more lateral organisational logic of 'boundary spanning' as those concerned defend their own domain in terms of autonomous operating theatres, wards, and claims on autonomous rather than shared budgets for them (Oliveira & Holland, 2013; Mørk, Hoholm, Maaninen-Olsson and Aanestad (2011).

The British NHS Reforms

Such vested interests and inertial logics, if without conceptualising the latter, were among the reasons claimed in the UK for reform of the NHS. The Thatcher and Blair governments in the UK did not overtly aim to privatise the National Health Service, but their presumption was that a flexible private sector always is more efficient than inflexible public sector 'bureaucracies'. The explicit logic was the introduction of an 'internal market' to the health service, and also out-contracting services which had been internal to hospitals or health centres. It was claimed that this would raise quality and widen freedom of choice (DHSS, 1983; Department of Health, 2004). Its implicit logic was that

with more out-contracting, and shorter term contracts, the power of professional associations and trades unions in the National Health Service would be decreased (Le Grand, 1997).

The case for change management was set out in the Griffiths Report (DHSS 1983). National Health Service hospitals until the Thatcher reforms used to be managed by boards jointly composed of doctors and a senior representative of nurses, as well as local elected officials - local councillors - with knowledge of the related local problems of health, education and housing, Griffiths recommended that hospitals now be governed by specialist managers with more rigorous private sector experience.

Making first 'trust' and then 'foundation' hospitals responsible for their own finance would encourage efficiency, while in the latter case of foundation hospitals, their being able to fund how and what they wished without approval from the Secretary of State for Health should both widen choice and attract more external finance. The model for foundation trusts was the so-called health foundations – *fundaciones sanitarias* - set up by the People's Party in Spain. These were publicly-built hospitals that were handed over to private companies to run for a fee. They had freedom from the health ministry and could set their own terms of service for their staff (Leys & Player, 2011).

The Community Care Act of 1990 offered a new voluntary scheme of GP 'fund holding' by which local doctors in larger group practices could gain more funds with more responsibility for their use, including the right to purchase hospital treatment or community care for patients, thereby introducing an internal market of 'purchasers' and 'providers', rather than a capitation principle based on a flat rate for every patient. General practitioners or GPs for the first time since the foundation of the NHS were given the right to influence the provision of hospital services. The hitherto powerful British Medical Association opposed this on the basis that it would tend to privilege bigger

practices and also reinforce the imbalance of provision in favour of the South East of England, but was overruled. Over half the general practices in the UK signed up to the new 'fund holding' scheme with, shortly thereafter, a marked decline in independent small scale practices (Pollock, 2004).

The implicit logic of the shift to privileging larger general practices was Fordist on the basis that they would provide models of greater efficiency which others then could emulate, rather than the 'craft' provision of services by doctors working from one room surgeries or even from their own homes. But the outcome of devolving responsibility for budgets to general practice level was both more direct external surveillance of how they used them by the government, and new internal surveillance by doctors in group practices in order to avoid sanctions limiting their funds. Initially, there was increased money, but within 'no excess' limits to spending. Doctors within general practices took to monitoring their own time and motion practice on a Taylorist basis, with the outcome, for the first time, of recommended limits to the time for consulting patients, such as that it should average not more than seven minutes (Pollock, 2004).

The logic of the Conservative government reforms was supposed to be more effective internal accountability. A new Clinical Governance principle resulted in boards being set up which should monitor information on admission and readmission rates, length of waiting lists for surgery in different departments and specialisations, drug prescription costs, complaints, health and safety accident reports, etc. These boards were given enough authority to effect change in systems and services. But this new internal management logic was contradicted in practice by not delving down to learn up from medical professionals what was or was not needed to reconcile economic with social efficiency, combined with an implicit logic of continually taking money out of the NHS on

the grounds of already having achieved 'cost-improvements' (Leys & Player, 2011), even though costs in practice were increasing.

Since the start of the second Blair government in 2003 more money was undoubtedly invested, but a rhetoric of 'devolved power' in fact increased bureaucracy at what was the former NHS Health District level, while external control was more heavily exercised from the centre on a divide and rule principle between those opting for 'fundholding' and those who did not. Another related problem was that 'change overload' created an environment of 'change-on-change' which meant that there rarely was time for a new policy change to be followed through and the effects evaluated, before the government decided to try something else. Overall, the rhetoric of 'devolving power' was contradicted by continued top-down demands for ongoing change, imposed and monitored from the centre (Leys & Player, *ibid*).

New Taylorism

The outcome of more centralised control contradicting a rhetoric of 'devolving power' was a focus was on process and outcomes, with mission statements, target setting, practice protocols, performance appraisals, vacancy reviews, quality audits, and 'clinical managers' similar to the line supervisors in Fordist production. 'Practice protocols' gave step-by-step details of how nursing should be performed as if nurses had not come to appreciate both this and the ethos of nursing in training. While the incoming New Labour government in 1997 nominally dropped the main features of the internal market in health, it quickly reintroduced them when Tony Blair reversed the instruction of its first Secretary of State for Health, Frank Dobson, that private sector hospitals could take patients only if NHS hospitals were at full capacity and could not accommodate them

(Pollock, 2004). It also, consciously or otherwise, continued the culture and practice of Taylor's (1911) theory of scientific management, or neo-Taylorism.

The outcome by 2004 had been a reduction in waiting lists. Therefore, the new Taylorism did achieve more patient throughput and thus higher productivity. But the ongoing pursuit by government of higher Fordist volume on the presumption of economies of scale, rather than of scope, also posed 'size' problems. Some of the new chief executives chose to take early retirement rather than manage trusts that the government enlarged, and then enlarged again, since in their view they then would have been too big to be able to know what was going on, far less achieve 'change management by consent' (Somekh, 2006).

In a general hospital case study, Bolton observed that in the New Public Management reforms in the National Health Service there 'a logic that emphasizes contradictory elements: the hospital must cut costs but also deliver a quality service... As nurses account for the largest part of the hospital budget, and also are accountable for how the quality of bedside care is perceived, these contradictions deeply affect their work' (Bolton, 2004, p. 320).

However, as a 2014 report from the New Economic Foundation put it, Government reforms of the NHS over the last three decades not only have transformed a democratically controlled public service into an open competitive market, but also increased rather than reduced costs. The costs of maintaining market mechanisms in the NHS have been conservatively estimated at £4.5 billion a year – enough to pay for either ten specialist hospitals, 174,798 extra nurses, 42,413 extra GPs, or 39,473,684 extra patient visits to Accident and Emergency Units in hospitals (NEF, 2014).

Lack of Voice

Albert Hirschman in his *Exit, Voice and Loyalty* (1970) stressed that economic efficiency not only was a matter of 'exiting' from a transactional relationship if either party were dissatisfied but depended essentially on 'voice' between buyers and suppliers to improve relations between them and also, crucially, on 'loyalty'. Little to no such 'voice' from base-up rather than top-down has been typical of NPM reforms in health in the UK, with the outcome of deeply straining 'loyalty' (Beardwell, 1998; Morrison and Milliken, 2003) and also operational efficiency (Edmonson, 2003).

Thus Bolton (2004) found in her case study that nursing staff resented that while the new 'consumers' of health service were given a formal voice, they as providers were not. The fact that the senior nursing officer under the New Labour reforms was a member of the new 'management board' was a voice too far removed from the 'shop floor' of operating theatres and wards.

Language also changed. 'Patients' now were to be 'customers', as in the privatisation of rail services were 'travellers' also became known as 'customers'. There was resentment of being told to 'smile' at 'customers' of their service as if nurses never had smiled at patients before, or as if they now were hostesses, with tacit resistance expressing itself in various subversive ways such as smiling at but disregarding a tiresome 'customer' in the manner earlier identified by Hochschild (1979, 1983) in his analysis of how markets can result in the commercialisation of human feelings (Bolton, 2004).

As with the American ritual of 'have a nice day' which, varying with the speaker and context may be sincere or, if the customer has been tiresome, cynical. Nurses in particular resented the implication that they were 'doing a job' rather than being able to demonstrate commitment to giving a service. Granted that most of them were not paid anything like the 'rate for the job' which would have obtained with such hours and for

such 'customer' commitment in the private sector, this was doubly offensive. As Bolton (2004) comments:

Nurses have patients' welfare at heart and are generally supportive of management schemes that are seen to benefit patients. However, while welcoming moves towards empowering patients, the notion of aggressive consumerism remains an alien concept. Nurses have taken on the guise of entrepreneurs, but in order to further their own definition of quality care. Nurses feel that they do not need to become customer focused as they are already patient focused, and they remain attached to a public service ethos (Bolton, 2004, p. 330).

But the lack of voice was not only internal within hospitals or trusts. It was national in that the series of 'health reforms' introduced from the 1980s through to the health care reform bill introduced by the Conservative-Liberal coalition in England in 2011 were strenuously opposed either for lack of consultation or for lack of response to warnings in such consultations from the British Medical Association, the Royal College of Nurses, The Royal College of General Practitioners and the Royal College of Midwives that it could 'destroy' the National Health Service (Warwick, 2012; Laja, 2012).

Challenge on Outcomes

With investment also of more resources from Labour's second election success in 2001, the outcome of both the Conservative and New Labour changes was an increase in patient admissions and patient-staff ratios. Therefore, Fordism in terms of a higher rate of patient throughput appeared to be working, although both admissions and patient-staff ratios fell after this dash for growth or what Cousins (1987) had earlier called the 'factory-like logic' of the 'new' National Health Service.

But there has been serious challenge to key figures published by the New Labour governments. For instance, one of its highest profile targets for the NHS was that no patient should spend more than four hours in a hospital Accident and Emergency unit.

Government figures claimed that by 2004 the target was being missed for only 4% of patients. But a survey by the British Medical Association found that scarcely more than a quarter of those sampled who had used such units were accurate. A 2003 report by the Public Administration Committee of the House of Commons cited evidence where maximum waiting times in the units 'were being circumvented by imaginative fixes'. (House of Commons, 2003). As *The Economist* (2015) chose to put it the official figures started to reflect a parallel world created by administrators striving to hit the target'.

The focus on internal cost reduction logic by externalisation of services defeated the explicit logic of delivering a better service to patients. For instance, infections have always been acquired in hospitals, whatever the rigour with which nursing or other employees seek to avoid them. But in NHS hospitals they increased significantly since out-contracting of cleaning and its subjection to Taylorist criteria. To increase their internal rate of return, contractors limited the disinfectant which cleaners could use and increased the wards they had to clean in a given time, meaning that they could not change the water or add cleaning fluid over allotted cost, time and motion limits. Cleaners were swabbing different wards with the same bucket of increasingly dirty and infected water. The result was an infection crisis in hospitals from the summer of 2003 caused by lack of hygiene, including MRSA (Revell, 2005).

Some of the new hospital management boards knew what the problem was but could do little about it since out-sourcing was part of the government's national strategy for reducing internal costs in hospital provision. Further, in its initial response to the hygiene crisis, rather than restoring control of both hygiene and health to nursing staff, the government mirrored the Sloan version of Fordism by appointing new national, regional and local hospital 'hygiene managers', quickly dubbed 'health commissars' by the national press. Several of these claimed that their inspectors could not find evidence for

the attribution of increased infection to out-sourcing. The government also recognised an increase in MRSA related deaths only in those cases where they had been directly attributed by coroners. Yet, even on this basis, the government's National Audit Office recognised that as many as 5.000 persons may have died of hospital acquired infections in 2004 alone (Revill, *ibid*).

Polly Toynbee, a deputy editor of *The Guardian* newspaper, recognised that: 'It is phenomenally faster to get into hospital under Labour - but one in 11 will catch something nasty when they get there' (Toynbee, 2005). Countering Tony Blair's comment that the problem was that 'there are good cleaners and bad cleaners', Toynbee responded that the problem in fact was: 'squeezed cleaning budgets with contracted-out minimum wage cleaners using watered-down detergents, aged mops, no training, no equipment, one cleaner to five wards and 30% vacancies in London' (Toynbee, *ibid*). She also found that one reason the government claimed that its inspectors could not agree with the diagnosis of the problem was that they gave notice of inspections in advance to hospitals, 'with managers bringing in all the night and weekend cleaners to thoroughly clean the areas to be inspected'. Overall, Toynbee commented: 'This is a New Labour parable... the excellent new NHS pay system that rewards acquiring skills with extra pay, doesn't apply to contracted-out cleaners, porters and security guards (who) should 'now be brought into the mainstream NHS team' (Toynbee, *ibid*).

The Costs of Out-Sourcing

A further New NHS parable comes from the contradiction of internal and external logic in the out-sourcing of cataract operations. In 2003, the New Labour government listed new 'diagnosis and treatment centres' or DTCs. These were mobile clinics which the health minister John Reid claimed at the time would provide cheaper services than

the NHS, cut waiting lists and offer patients a choice of where and when they have their operations.

The Radcliffe Eye hospital was at first bemused and then affronted by this, and wrote in protest to its member of parliament. In May 2002, the health department had explained that the clinics would ensure that 'no cataract patient is waiting more than three months by December 2004'. But this was precisely the target the Oxford eye hospital already was meeting. Almost all the cataract patients then handled by the hospital were to be referred to the DTC. The exceptions were to be complex rather than routine cases. The routine cases were to be treated in a mobile DTC clinic which would visit their area, according to an internal departmental memo, on only one day in every 10 or 11 weeks. To 'save money', the memo indicated that the clinics might operate 'on both eyes at once'. NHS surgeons operate on only one eye at a time, in case an infection leaves a patient completely blind (Monbiot, 2003).

Most of the cataract operations at the time conducted by the Radcliffe therefore were to be transferred to the foreign company running the new diagnostic and treatment centre. But while it cost the eye hospital £685 to perform each cataract operation, the internal departmental memo revealed that the private company was being offered £799.6 One of the reasons why the private surgery was more expensive is that surgeons needed to be flown in to perform it, and would be paid between £450,000 and £500,000 a year. Consultants employed by the NHS at the time were paid £60,000 a year. There also were negative implications for hospital training. The Oxford eye hospital had used routine cases to introduce apprentice surgeons to cataract techniques before bringing them onto cases which were more complex. But the routine cases now were to be out-sourced (Monbiot, *ibid*; Pollock, 2004).

This out-sourcing principle not only did not increase choice, since the mobile units would only come on scheduled days for one day only every ten or eleven weeks. It also entirely contradicted the main textbook principle of external economies in which, since Marshall (1870), it was presumed that firms only would out-source if it saved them money. It also wholly ignored the 'rational' transaction cost principles of Williamson (1979) and Teece (1992, 1997), that organisations will 'rationally' decide whether to internalise or externalise operations on a cost-effective basis.

Social Inefficiency

The new Taylorist focus on internal hospital efficiency also neglected resulting social diseconomies. For example, part of the increase in patient admissions was due to them spending less time in hospital and thus an externalisation of post-operative care from hospital staff to general practitioners or health workers visiting patients, or families, whose members could have to take time off work to care for those concerned who had been sent home to recuperate. Faster throughput also has meant a higher rate of re-admissions of patients who formerly would have stayed longer in hospital. Perversely also, although suiting managers' claims on admissions, the total admission figures include those who have had to be readmitted because of complications or failure to recuperate, with a 'revolving door' effect that sending patients home early raised 'success' in later re-admission rates (Stern, 2006).

The introduction of new hospital managers and a change in the composition of governing bodies also meant a loss of 'externalities' of interrelated local knowledge and experience of the causes of health problems. For instance, it is commonplace for local politicians to receive letters from a local doctor stressing that there was nothing that he or she could do to remedy a patient's chest condition until the damp problem in his or her

local authority housing had been remedied. With more broadly community representatives including local councillors on the governing bodies of hospitals and local and regional health authorities until the early 1980s, such problems could be voiced and addressed in a relatively integrated manner.

But this is less the case when the managers are from the commercial sector rather than the local community, have no direct knowledge of it if they live elsewhere, nor the power of a local councillor to do something about it. The readmission of the individuals with a chronic and recurrent chest complaint therefore will increase the internal performance benchmark of admission rates, while doing nothing to resolve the underlying housing problem causing the patient's ill health.

New Bureaucracy

Also, despite the explicit claims of both Conservative and New Labour governments that market solutions would reduce bureaucracy, the 'new' National Health Service proved more rather than less bureaucratic. New layers of management were established for supervision and control of 'internal market performance' at national, regional and local levels. Doctors needed to commit to time and motion resource allocation in their local surgeries or health centres. Previously their main focus was on patient care, even though they knew that they were working within general guideline limits on resources. Now they also have to manage their own budgets, and justify them according to a host of specific performance indicators which include quality indicators but whose main focus is client turnover. According to former Health Secretary Frank Dobson, on the basis of parliamentary questions, the administrative costs which in the pre-reform NHS were less than 5% of the NHS budget, by 2005 were approaching 15% (Carvel & Woodward, 2006).

The government then said that it would reduce this by 2010. But by 2011 this still was near treble the pre-reform level (Leys & Player, 2011).

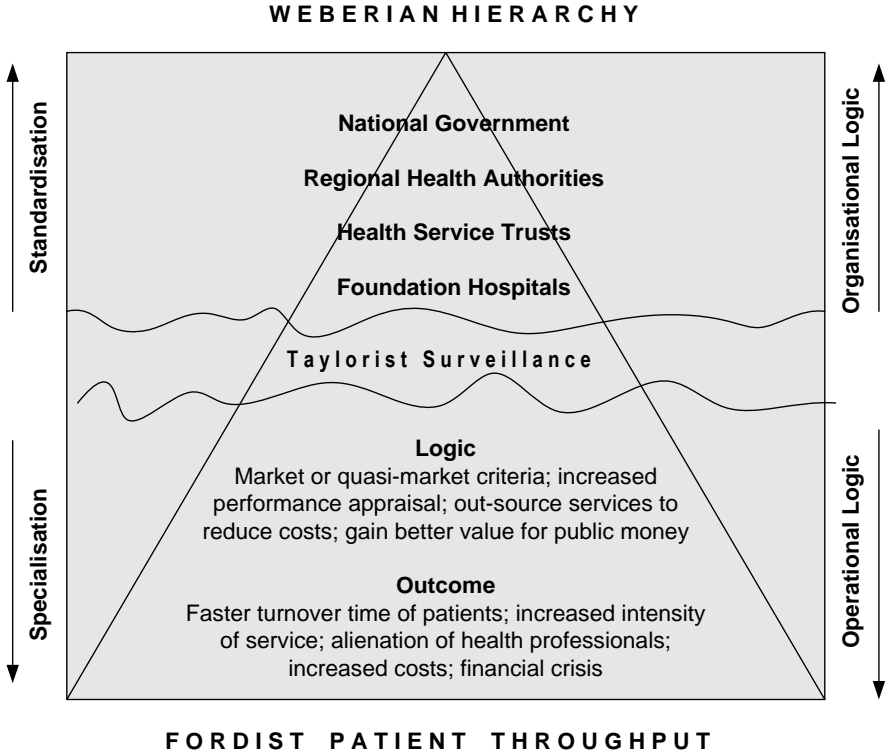
The outcome was not better patient care, or 'customising' care to patients' needs, but focus on timed throughput of patients, just as Taylor timed work operation to raise the throughput of vehicles in production. Quality, as in classic Fordism, was subsumed to higher volume. The government admitted some of the limits of the new Taylorism in its NHS Planning Framework to 2008. Published in June 2004, this claimed to be 'three big shifts': (i) putting patients and service users first through more personalised care; (ii) a focus on the whole of health and well-being, not only illness; and (iii) more devolution of decision-making to local organisations. These shifts were to be paralleled by moving away from a system that is mainly driven by national targets to one in which: (a) standards become the main driver for continuous improvements in quality; (b) greater scope was allowed for addressing local priorities; (c) all relevant local organisations rather than only hospital boards were to play a part in service improvement (Department of Health, 2004).

But this again proved rhetoric, not least when the increased funding for the NHS came to an end. By March 2006, the health service reforms were in disarray and the chief executive of the NHS resigned as a result of cash limits, overruns and deficits. 4,000 jobs already had been lost in two weeks in NHS hospitals, and some estimates were reported that 15,000 would have to go (Carvel, 2007). The senior civil servant who was chief executive of the new managerial NHS resigned after telling the heads of 28 strategic health authorities that he would hold them personally responsible for any discretionary spending over pre-agreed limits. The Royal College of Nursing said a preliminary analysis claimed that nurses on the basic grades bore the brunt of cuts, with work transferred to lower-paid healthcare assistants. Inversely, NHS Trusts were trying to recruit senior nurses to take on some tasks previously performed by doctors not as assurance of a career

path that could be integral to more efficient hospital organisation, but as a stop-gap reaction to a funding crisis (Carvel & Woodward, 2006).

Figure 1

Weberian Hierarchy, Fordism and Health



The underlying reasons related precisely to the difference between treating labour as a variable cost, and the high HRM commitment to labour as a fixed cost. The NHS reforms had been based on the principle of reducing the cost of labour on the implicit logic of raising its efficiency through increased surveillance rather than a change in methods of work operation or hospital organisation. Rather than recognising the vocational commitment of medical staff and seeking dialogue with them to increase efficiency through new methods of work operation, both the Thatcher and New Labour governments distrusted them. When limits were reached at higher unit costs through the

external logic of out-sourcing than would have been the case through internal NHS provision the government simply declared that the costs of its reforms had hit its targeted ceiling, refused more money and blamed NHS managers for their own failure to manage the budgets that had been devolved to them.

Change by Stealth

The Weberian and Fordist logic of New Public Management in the NHS is stylised in Figure 1. Yet this only captures part of the picture, for there also was another hidden agenda. In their analysis of what has transpired, Leys and Player (2011) have chronicled a 'stealth agenda' to privatise the English NHS. This neither was overt in the Thatcher governments' agenda, nor in the agenda of New Labour, nor in the manifestoes of the Liberal Party before it formed a coalition with the Conservatives in 2010. They trace this to when then New Labour Minister of Health Alan Milward in July 2000 was negotiating a so-called concordat with the Independent Healthcare Association.

Three major changes in the NHS were required. First, the taboo on private provision of NHS clinical services had to be overcome, and a bridgehead created for the private sector in the NHS. Second, NHS organisations had to be converted into 'real businesses' rather than the 'make-believe' businesses of the so-called internal market. Third, the ties between the NHS workforce and the NHS had to be weakened, so that enough NHS staff would be ready to transfer to private sector employment as private providers took over more and more NHS work. According to Leys (2011):

All of these changes were major. Yet most people were largely unaware of them and certainly unaware of where they were leading – and that includes many MPs and even many clinicians. And not just because the NHS is complex, and organisational changes don't make sexy headlines. It is above all because the changes were made covertly, using government powers that did not require primary legislation. The true purpose of a series of so-called reforms

was deliberately concealed. It is because of this that what has happened deserves to be called a plot. (Leys, 2011, p. 1)

None of the changes were sanctioned by an electorate. They had been explicitly disavowed by the Liberal Party which in its earlier election manifesto had declared that it would reverse top-down changes in the NHS. This parallels the disenfranchising of electorates stressed in chapter 1 in the case of the Eurozone crisis and the manner in which it was assumed that elected governments could not be trusted to manage public finances responsibly. Which depended on the cases in question, in which Greece had failed, yet Spain and Ireland before the crisis had been impeccable, with levels of debt lower than Germany.

Alternative Logics

By contrast, there are alternative logics in post Fordist paradigms of health care and provision. For instance, since WW2 Sweden has enjoyed one of the leading world healthcare systems. But by the early 1990's, rising healthcare costs prompted an incoming Conservative government to reduce central government funding to local authorities for health provision. In Stockholm, the city council cut funding for hospitals across the board by 15%. Most hospitals in Sweden did what they thought was their only option - downsizing by nursing staff thereby increasing demands on those remaining in terms of labour intensity, and the threat of sanctions for non-performance.

Consciously influenced by an earlier introduction to the conceptual framework of post Fordism, and rather than implementing a downsizing programme, Jan Lindsten, executive director of the Karolinska hospital, with over 4,000 employees, commissioned a study of patient flow both into and through the hospital, similar to analysing the flow of work-in-progress in the production sphere (Kaplinsky, 1995). The results showed that

average waiting time for surgery was eight months. Surgeons spent as much as two thirds of their time between operations, much of it waiting for the next patient, frequently because of lack of an anaesthetist. Operating theatres for several specialisations were idle for up to a third of normal working hours. Others were over pressured.

Lindsten's change management programme had three objectives: to improve the quality of service to patients; to enhance operational efficiency but, also, and notably missing from NPM reforms in the British NHS, to improve employee morale. It identified four key problems.

1. Under-Utilisation of Capacity and Time

The diagnostic phase of started with surgery and directly addressed the issue of under-utilisation of capacity. It showed that 59 per cent of potential operating time was not being utilised.

2. Skill Bottlenecks

One reason was a relative shortage of anaesthetists and anaesthetic nurses. Anaesthetists were spending 85 per cent of their time with patients, but surgeons only 25 per cent in surgery.

3. Slow Changeover Time

Another was slow changeover procedures between operations. In one operating theatre, nearly a fifth of operations were cancelled. Less than a third of the cancellations were because the patient did not show up; the others were due to inadequate organisation.

4. Lack of Patient Path Planning

Before Jan Lindsten initiated change management, there was no coordination of patient flow from reference by a doctor through diagnosis to operations. People were referred to different specialisations and services in haphazard manner, needing to make several visits

to the hospital on different dates. As an outcome waiting lists of up to seven months were common. But, after the change management, dramatically reduced.

Lindsten's principle was similar to post Fordist customisation: putting the patient first. But this was not simply re-branding patients as customers. Nor did it deny the commitment of medical staff to focus on patient care. It enhanced it by addressing both the operational logic of how things were done, and extending this to the organisational logic of the hospital itself. Improving service to patients would be the focus of all organisational structure, flow and methods of work operation within the hospital.

Box 1

Success in Post Fordist Hospital Organisation

The change management programme at the Karolinska Hospital made it possible to realise the following.

1. Flexible capacity use of operating theatres was on the likely duration of the operation rather than the type of operation. As a result all theatres were segmented in four groups – fast, medium, slow and emergency.
2. Flexible theatre use was matched by flexible use of wards. Underlying this was the principle of clustering 'families of service' both within the organisational logic of the hospital and the operational logic of departments and units.
3. With multiple use of operating theatres, two were closed, thereby reducing overhead costs.
4. More anaesthetists were hired, and new pre-operation anaesthetic unit established, with anaesthetists available to service operating theatres on a more programmed basis.
5. New 'nursing coordinator' posts were created to assure patient path planning on the principle that all diagnosis, other than in highly complex cases, should be in 'one scheduled day'
6. While doctors initially resisted nurses scheduling appointments for them, Lindsten offset this by assuring them that the 'one day' principle

for diagnosis, on which they had to be present, would assure them a guaranteed 'free day' for their own research.

□ The new position of 'nursing coordinator' also created a career path for senior nurses, drawing also on their better practical knowledge, than that of doctors, of why there had been delays in 'getting patients into ops'.

□ The time between operations was cut by up to half. Average waiting time for surgery was reduced from six to eight months to six to three weeks, and in some cases one week. As an outcome, patient throughput also increased by a quarter.

□ Overall unit costs were cut by 15%. Unlike 'downsizing', no one was made redundant. Karolinska had become 'lean' by cutting wasted time and under-utilisation of staff, skills and fixed resources.

The change management achieved at Karolinska is summarised in Box 1. It identified shortcomings in operational logic and addressed inertia in organisational logic arising from them. It involved 'boundary spanning' between different departments. Such spanning (Cross & Parker, 2004; Nicolini 2011) can mean that operational managers within different units can gain from synergies that can be mutually beneficial

On the other hand, the Karolinska model should not be idealised. Many of the medical staff at Karolinska felt that they knew what the problems were before the change management exercise was undertaken, and that it should have been 'driven internally' rather than imposed top-down. What had been gained was remarkable, but as much flexibility-by-constraint, including the initial pressure from government to reduce costs, rather than flexibility-by-consent.

Swan *et al.*, (2007) nonetheless found that sustained success in boundary spanning requires negotiation and reconciliation of different interests since if boundaries are changed or shifted, some actors' interests will be or reduced or displaced rather than enhanced (Guston, 2001). Both Guston (*ibid*) and Mørk *et al* (2012) have stressed the

importance therefore of recognised procedures not only to facilitate 'voice' but to follow this through by the mutual adoption of innovative practices. This is consistent with the proposals that one of us made for innovation-by-agreement between social partners (Holland, 2000).

Innovation-by-Agreement

The case for 'flexible production' explicitly drawing on post Fordist Japanese flexible production was advocated by one of us to Jacques Delors (Holland, 1993) and informed his White Paper *Growth, Competitiveness, Employment* (COM 1993). This then informed the recommendation to the Portuguese Presidency of the 2000 European Council of the case for innovation-by-agreement, which was then endorsed by the Council in the 'Lisbon Agenda'.(European Council, 2000).

A common and in part justified perception of the Lisbon Agenda 2000 is that it has failed, not least in its claim that within ten years Europe should be the most competitive economy in the world. But one of the reasons why it did not succeed is that governments failed to endorse that its recommendation for innovation-by-agreement between social partners should be part of the *acquis communautaire*, i.e. citizenship rights for all members of the EU, and thus part of a European Social Model.

The proposal to the Council for innovation-by-agreement included:

- achieving better work-life balance by allowing negotiation of the incidence of individual working time to non-work time to suit family or other personal needs;
- recognising a share of overtime working as 'time credits' which employees later can draw on as paid 'under-time';

- enabling individual proposals for new methods of work operation to be individually recognised and credited, as in Japan;
- combining flexible methods of work operation with job variation including horizontal mobility to offset alienation from routine, as also in Japan;
- ‘enhanced competence profiling’ to extend and diversify the application of skills;
- skills path planning for both lower line managers and workers rather than only career paths for middle or higher levels of management;
- The right to life-long learning in the sense of funded retraining or further professional qualifications.

The proposal for Innovation Agreements therefore had the potential to combine economic efficiency for an organisation through Japanese models of continuous improvement with what most Japanese firms had *not* achieved - both economic efficiency *and* social efficiency in the sense of more effectively meeting the personal needs of employees, especially for work-life balance. This case was reflected in the text of the Lisbon Presidency Conclusions for:

restoring the European Social Model [by] agreements between social partners on innovation and lifelong learning, by exploiting complementarity between lifelong learning and adaptability through flexible management of working time and job rotation,... reducing occupational segregation, and making it easier to reconcile working life and family life. (European Council, 2000).

Lisbon, therefore, was less a call for flexibility-by-constraint or ‘structural reforms’ under threat of closure or down-sizing, than for innovation-by-agreement between management and labour at plant, branch or other local level to gain and sustain both economic and social efficiency and thus reinforce a Social Europe model.

The EU Commission followed Lisbon through with two documents which made this explicit: ‘The European social dialogue, a force for innovation and change’ (COM, 2002),

and the Communication on 'Partnership for change in an enlarged Europe – Enhancing the contribution of European social dialogue' (COM, 2004). These therefore stressed that the Lisbon Agenda was not only about competitiveness or technical innovation, as it since has been perceived, but for gaining mutual advantage for employers and employees which could enhance both economic and social efficiency.

Gaining Mutual Advantage

The case for innovation-by-agreement including the right to work-life balance was intended to be a European citizenship right. But, as endorsed in the Lisbon Agenda was only a recommendation.

- It nonetheless could be adopted either at a national level or the level for an individual hospital or group of hospitals in a regional or local health authority.

To operationalise it implies procedures to enable proposals for innovative methods of work operation to be recognised, and their added value to the organisation shared, few employees including middle management will be motivated to propose them. This has several implications.

- Employees proposing innovative methods of work operation, including middle managers, must know that they are not thereby innovating themselves or colleagues out of a job.
- Multi-skilling and multi-tasking may not reduce stress, but skill profiling and skill path planning can enhance individual fulfilment, while horizontal mobility both can provide job variation and lessen the incidence of intensive 'front line' work pressure.
- Gaining work-life balance through being able to customise individual working time can reduce or avoid 'burnout'. Absenteeism is one of the biggest problems facing health

systems, especially in hospitals, over stressing also other health employees. The right to work-life balance could redress it.

- Innovations in methods of work operation focused on cutting wasted time and better use of fixed resources are a key alternative to longer hours or cutting jobs.

- The best resource for gaining this within an innovation trajectory rather than only a cost cutting trajectory is employees themselves. It is they rather than top level health administrators who best know what is frustrating operational and organisational learning.

- Effective mutual feedback is vital if both management and employees are to be able to voice not only their own interests, but also their earlier learning from experience on how operational logic can be improved. Such voice should be able to articulate and improve what otherwise is implicitly assumed, or has been eroded.

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Locational advantages within production networks of transnational corporations and the role of industrial clusters²

Anikó Magasházi

Introduction

The unipolar world order after the Cold War, international liberalization of trade and finance, revolutionary developments in information and communications technology as well as in transportation led to accelerated globalization worldwide, which fundamentally reshaped the global economic system. The ICT revolution made it possible to coordinate complex networks at a distance, and the huge differences in wage cost between developed and developing/emerging nations made separation of production stages dispersed geographically profitable, called by Richard Baldwin as the 2nd unbundling of globalization. (Baldwin, 2012). The major part of the world trade is conducted nowadays within internal networks of transnational corporations (TNCs). The question arises as to what role institutions of nation states, regions, local communities can play in the new environment in order to navigate towards and increasing the well-being of their societies.

Within the role of FDI, globally expanding TNCs have played an increasing role in the catching up endeavours of emerging economies. The current study put special emphasis on the Southeast Asian and CEE region to identify the interaction of globalization and localization effects in the economy with impact on the society.

In the academic literature of world economic adjustment increasing attention has been devoted from the eighties to the rapidly expanding newly industrializing countries

² The research was conducted with the support of the European Union – Hungary, within the TÁMOP 4.2.1.D-15/1/KONV-2015-0006 identification number– Scholarship for Hungarian and foreign students and researchers – in the framework of the development of Kőszeg innovative research base and knowledge centre within the professors’ and research netorl of Corvinus University, Budapest

(NICs) in Southeast-Asia (SEA) - South-Korea, Singapore, Hongkong and Taiwan -, referred today by the terminology of newly industrialized entities (NIEs). They relied predominantly, some of them partly on FDI, pursuing however deferring economic development strategies. The rise of China from the nineties opened new economic opportunities not only for Hong Kong and Taiwan but for the whole East Asian region, too. Singapore's small local market size and scarcity of resources was efficiently counterbalanced by its increasing economic ties with its ASEAN neighbours. Thailand, Malaysia, Indonesia have moved up in the meantime on the development ladder as a next group of emerging economies.

Meanwhile Hungary and its post-socialist neighbours entered as well from the nineties the global economic arena, the collapse of COMECON, and the old economic order have left their governments with urgent tasks in world economic adjustment. The FDI-driven economic policies of the new emerging region brought all the Visegrad Four (V4) countries by the end of the century into the epicentre of globalization, too.

This research has concentrated on two aspects, which has been gaining increasing importance in recent years in the V4 region, as well:

- 1.) The characteristics of global value chains and their impacts
- 2.) The emergence and role of industrial clusters in innovation, internationalization of domestic firms, upgrading

In order to reach the aim of the paper, a brief review of the relevant literature follows in Section 2, connecting also the global and local aspects, leading to the research question. In Section 3, we provide a summary of empirical results, case studies available through secondary sources on the Southeast Asian development. Then in Section 4 the developments in the CEE region are discussed, with special attention to Hungary. There is hardly any research connecting both global and local aspects in the CEE region,

especially not in the last five years. In the final section conclusions, policy recommendations and possibilities for further research are formulated.

Literature Review and Research Question

About 60% of today's global trade, amounting to 20 trillion USD, consists of intermediary goods and services which are combined at a later stage to create final goods. (UNCTAD, 2013). The fragmentation of production processes have led to transnational and cross-border production systems, causing much more intense integration, functional interconnectedness. The two distinct areas within globalization research analyzing this process are the global value chain (GVC) – growing out of the still existing global commodity chain (GCC) concept and the global production network (GPN) research. From the firm-perspective, while GVCs concentrate more on value creation, contribution to value added of the individual chain elements, the latter deals with the separate functions of each of the stages from the perspective of the final products. Coe define GPNs as the globally organized nexus of interconnected functions and operations by firms and non-firm institutions through which goods and services are produced and distributed. (Coe et.al. 2004: 471-473).

Although global chain and network theories have roots in the 80's, the unfolding of accelerated globalization in the nineties induced to develop a concise and till today continuously expanding concept of global commodity chain coined and published initially by Gereffi and Korzeniewicz in 1994, following its presentation at a conference already in 1992 at the Duke University. They drew their initial inspiration from Immanuel Wallerstein's World System Theory published in 1974. The early Commodity Chain concept by Gereffi expressed the intention of establishing a meso mode of analysis below and above the nation-state, revealing macro-micro linkages. (Yeung, 2015: 9).

By 2000 the concept was further developed into the framework of global value chains (GVCs). Their importance is seen in the way how they „link together workers and consumers around the world and often provide a stepping stone for firms and workers in developing countries to integrate into the global economy (Gereffly and Stark, 2011:2). GVC framework concentrates on sequence of value added from conception to production and end use. From top down view it examines how lead firms govern globally its affiliates and suppliers, from bottom up view, how GVCs impact the trajectory of economic and social upgrading of the firms of the given economy/region.

Based on Gereffi (1995) and Gereffi and Stark (2011) we can identify five main elements of analysis of GVCs:

1. An input-output structure - showing the whole flow from raw materials till the end product.
2. It has a geographical aspect
3. A governance structure which detail how the GVC is being controlled
4. An institutional context
5. Upgrading, which describes how producers move between various stages of the value chain.

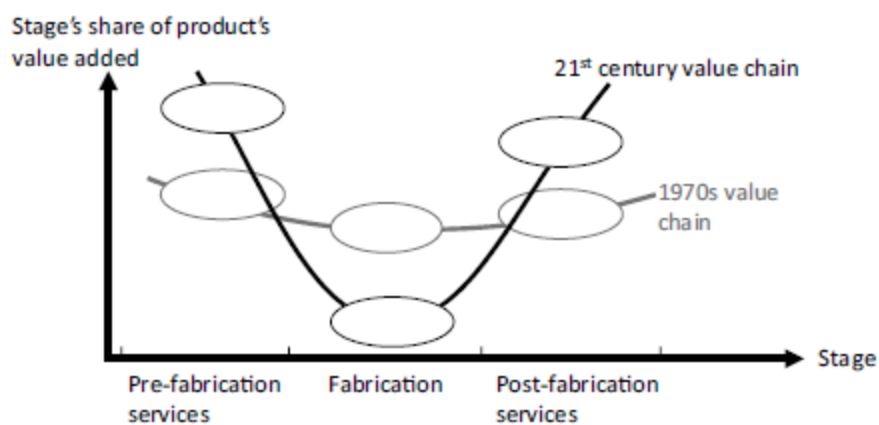
Gereffly (1999) and Humprey and Schmitz introduced the definition of upgrading, describing it as movement towards higher value added, and analyzing what movements occur between different stages of the value chain. (Humprey-Schmitz, 2002) (Gereffi, G.& Stark, F. 2011:4). Humprey – Shmitz (2002) defines economic upgrading, evaluated on the firm-level into four main types, which has been seen as a widely accepted typology since then:

1. product upgrading: moving into more sophisticated product

2. process upgrading: transforming inputs into outputs more efficiently by reorganizing the production system or introducing superior technology
3. functional upgrading: acquiring new functions in the chain (or abandoning existing functions) to increase the overall skill content of activities
4. inter-sectoral upgrading: using the knowledge acquired in particular chain functions to move into different sectors

A well spread visualization of the different qualities of stages of GVCs is the so called „smile curve”, showing also the deepening of the smile in th 21st century value chain, as the stages before and after the production proved considerably higher value added.

Figure 1. The smile curve



Source: Baldwin – Evenett (2012:90)

As GVCs became more and more widespread, a further important contribution created a more refined typology of governance structure by lead firms, adding beside the traditional market and hierarchical governance, modular, relational and captive governance types as well. (Gereffi, et al. 2005). The different governance types can exert an effect on the upgrading of supplier firms.

- 1.) Market governance: simple transactions, central governing mechanism is price
- 2.) Modular governance: production or service according to customer's specification, supplier produces independently, take full responsibility for production
- 3.) Relational governance: complex interaction between lead firm and supplier involving tacit knowledge exchange and knowledge spill-overs
- 4.) Captive governance: high level of control by the lead firm, small suppliers may find themselves locked in, dependence on a single lead firm
- 5.) Hierarchical: vertical integration and managerial control within a set of lead firms that develops and manufactures products in-house; products are complex, lack of highly competent suppliers (Cattaneo et.al.,2013)

The Global Production Network (GPN) framework was developed in the first years of the 2000s. It defines its roots in Actor – Network Theory (ANT) from the sociological – cultural perspective as well as brings in the territorial logic from the discipline of economic geography to include development impact on the territories these networks encompass. The first contributors in creating the GPN framework were Dickens and Henderson, the ideas of GPN and regional development were initially developed by Coe et.al. (2004) and further enhanced by Yeung (2009) extending the research to strategic coupling and regional development. (Coe &Yeung 2015: 15)

Proponents of the GPN concept Neil M. Coe and Henry Yeung state that GPN “brings together a wide array of economic actors, most notably capitalist firms, state institutions, labour unions, consumers and non-government organizations, in the transnational production of economic value.” It is a broader framework, stressing GPNs role in economic development. Their most recent book defines the new framework named in the book GPN 2.0, with the aim to contribute to explanations of uneven territorial development in the global economy. (Coe & Yeung, 2015)

Coe underlines that despite the different approaches, there is a growing consensus that an important key to understanding the complexity of the global economy is the concept of the network. They see however a major difference between Global Commodity Chain (GCC)/ GVC and GPNs firstly, GVCs are more linear, while GPN research aims at including all kinds of network configurations. "Secondly GCCs/GVCs focus narrowly on the governance of inter-firm transactions while GPNs attempt to encompass all relevant sets of actors and relationships". (Coe et. al. 2008 : 272). We find it important to add a further quality of GPN research, whereas „the precise nature and articulation of firm-centred production networks are deeply influenced by the concrete socio-political contexts whithin which they are embedded" (Henderson et. al, 2001: 445-46 in Yeung 2008).

The value chains and global production networks have not only become a major organizational innovation in global operations, but they also acted as a catalyst for international knowledge diffusion (Ernst – Kim 2001). Although in the academic literature the terminology of GVCs is most wide-spread, we use the global production network (GPN) terminology referring to regional development, with the exception, that the referred author belongs to the GVC research school.

While GPNs intend to explain the impetus for economic development generated by globalization impacts, industrial and business clusters enhance the local element. In relation to GPNs and competitiveness, regional competitive advantage, opportunity for economic and social upgrading, we believe that the appearance and development of industrial/service clusters is an important research area. Porter's widely accepted definition of industrial clusters describes the phenomenon as a geographic concentration of interconnected firms and associated institutions. As Porter states that although old reasons for clustering of firms diminished with the globalization, „new influences of

clusters on competition have taken on growing importance in the increasingly complex, knowledge-based, and dynamic economy". (Porter, 2000: p 15.).

Clusters „can transact more flexibly, share technologies and knowledge more readily, operate more flexibly, start new businesses more easily, and perceive and implement innovations more rapidly. (Porter 2007: p. 2). They increase trade and investments in the broader agglomeration through cost-savings through linkages. An interesting dimension in academic literature addresses the impact of clusters on entrepreneurship. (Delgado, Porter, Stern 2010). We believe GPNs and clusters are in many ways interconnected, still there are only very few examples in academic literature to combine them in a research.

Humphrey and Schmitz linking first industrial cluster and GVC research in 2000 raised the question of the scope of local development strategies and local competitive advantage based on industrial clustering in an increasingly globalized world. While GVCs can provide the possibility of certain capability building for local firms, the diffusion of information required to enhance the local area's competitiveness can happen through clustering. Upgrading aimed at repositioning of the cluster itself is already a more risky, complex task to reach new market, or old markets in new ways. For a successful local industrial policy to achieve radical product or functional upgrading a coalition of all actors concerned is an absolute minimum requirement both from the side of the public and the private sector in an even policy network architecture, without top down approach. (Humphrey-Schmitz, 2000: 28-29)

In a later research they examine value chain relationships and upgrading in clusters concluding that upgrading prospects of clusters differ according to the type of value chain they feed into. Thus while a quasi-hierarchical chains, characterized by power and uneven relationships, promotes product upgrading, it is not beneficial to further diversification,

functional upgrading. Those chains, which are characterized by even networks – supposing equally high level of competences - constitute ideal upgrading conditions in all respects. (Humphrey-Schmitz, 2002: p. 1023). Thus the local aspect, how innovative, supportive the environment around the local firms is in establishing local, regional network possibilities for joint improvement of their skills and competences represent a crucial element for a more beneficial impact of accessing GVCs. The different type of chain relationships have crucial effect for upgrading in clusters, may even change the quality of the cluster itself.

The limits to functional upgrading can as well be temporary in quasi-hierarchical GVC, as power is relational – assumes the powerlessness of the other party. In a conducive environment producers or their spin-offs may acquire further capabilities, e.g. product development, design, acquiring new markets, investing strongly with own or public funds in the future. The importance of such learning have been supported by the example of the Taiwanese electronics industry, how they achieved to be part of shared supply networks, making design supplied by one customer and then make adaptations and supply other customers with other markets. The rise of China as production base however raises the need for even more differentiated approach in fostering innovation, from “manufacturing first” to “idea first” approach. (Sturgeon-Lee 2004: 43)

Based on the literature discussed, we would like to add another element of GVC-cluster interaction. What role national and local public authorities can play to enhance an innovative environment conducive to upgrading of the member firms of industrial clusters within GVCs? An overview of international best practices will lead to conclusions for the Hungarian developments. We believe that in the next decades research on interaction between TNCs and host regions, should gain increasing importance. Both the theories and empirical studies are fractional, often ambivalent. We agree with Rugraff,

that a critical, empirical approach is missing from the academic literature, which examines the development versus heterogenic character of TNCs, and the fact, how decision-makers of host economies can influence better TNCs (Rugraff, E. 2012: 90).

Overview of Literature and Empirical Findings in East-Asia

The East –Asian literature on production networks has its roots in the Japanese economist, Akamatsu’s Flying Geese paradigm, dating back to 1935. He described the interconnectedness as “V” shape structure how Japan led the “Greater Prosperity Sphere in East-Asia” followed by groups of countries on lower level of development, transferring production there following its military expansion. It re-emerged in the 1970’s-80’s, especially after the “Plaza Accord”,³ when Japanese companies settled their manufacturing units of products of lower technological level in Southeast-Asian countries– the first group being Korea, Taiwan, Hong Kong and Japan, followed by Indonesia, Malaysia, Thailand and the Philippines (Xing, 2007), by the means of economic expansion. (After the transition German, Austrian and Italian companies represented this form of FDI in the textile, shoe and electronic industry of the V4 countries).

As the rise of China coincided with the new global economic structures emerging in mid-nineties, where TNCs “fine-sliced” and transferred vertically parts of their production processes according to comparative and competitive advantages, China’s huge production base was included in this process. Thanks to its strong private sector activity, China has become an important player within the global value chains in the last decade, referred to

³ The agreement of the G5 countries (US, Japan, German Federal Republic, France and UK) signed in the New York Plaza hotel about the depreciation of the US dollar against German mark and Japanese Yen to correct huge trade imbalances between USA and Germany, USA and Japán. The unprecedented trade and investment invasion of Japán into Southeast Asia followed unplanned.

as “Bamboo capitalism” in the literature, with major impact on trade and FDI in East-Asia. (Xing, L. 2007, The Economist 2011).

Regarding industrial clusters the East Asian academic literature also created a symbolic terminology, the so-called “water lily model” describing the most recent developments through industrial clusters, pointing at the regional competitive advantage with international integration, saving link costs, increasing trade and investment in the wider agglomeration. (Park 2005 in Han 2012). Clusters emerged first in Japan, then paralelly in Korea, Taiwan and later in China as “floating lilies”. A typical East Asian example is the development of the LCD panel manufacturing industry, which started in Japan, then moved to Korea, thereafter to Taiwan and finally to China. Today Korean firms (LG Panel, Samsung), Japanese companies (Sharp) and Taiwanese companies (Nam et. al. 2010) produce 90 % of the world LCD panel production (Han, Oh, Yoo 2012).

A number of empirical works in East Asia demonstrated the utility of strategic coupling and regional development, which has driven economic growth in Asia. Coe and Yeung detail identified cases of international partnerships between lead firms and local firms, in which development takes place through direct connections of regions into GPNs in e.g. in Taiwan, Singapore, or through indigenous innovation driven by industrial policy in case of the South-Korean chaebols. (Coe-Yeung, 2015:30).

A concise account of interconnectedness between GPNs and industrial clusters with case studies is provided in Yeung’s very conclusive paper (Yeung, 2008). It underlines that accelerated globalization rendered the region as most significant site of competition across the global economy, starting from the macro regions of the important Triad or “motors” (North-America, Western Europe and Southeast Asia) (Ohmae, 1995, Scott 1996, 1998 in Yeung, 2008:3) or smaller crossborder regions, as well as subnational regions. The eminent role of Southeast Asia can be partly attributed to the process of

economic development and regional transformation, driven by the emergence of industrial clusters in high growth regions in specific Southeast Asian countries. Such examples are the electronics clusters in Penang and Johor in Malaysia, Greater Bangkok Area in Thailand and in Singapore as well as the automobile cluster in Bangkok and Rayong in Thailand, the chemical and biomedical clusters in Singapore. These examples lead to the concept of seeing “GPNs a globalized/decentralized phenomenon and industrial clusters as a localized/concentrated constellation. The former operates on a global scale and is constantly searching for better production locations whereas the latter is developed to “bring down” and “localize” this highly globalized production activity.”(Yeung, 2008: 3-4). The supportive role of the state and its manifestation in local and regional institutions, availability of economy of scale through technology- or expertise specific productions systems, economy of scope in case of co-presence of different industries, availability of local or non-local financial capital, all contribute to higher value-added activity to be created and captured in these locations. TNCs are even ready to transfer coordination centres for their GPNs in case the location well plugged into both local and non-local forms of capital, as the examples of Singapore and Hong Kong demonstrate.

An important aspect of contemporary GPNs is their changing organizational dynamics – caused by new critical success factors of competitiveness, time-to-market pressure and extreme cost consciousness in many industries, thus TNCs are searching for strategic partners. Although Asian firms were latecomers in global competition, they pursued certain competitive strategies that promoted their cost advantages and production capabilities – and *together with their global lead firm customer have started to organize their production activities on a regional basis in Southeast Asia*. Since the 1990s upstream and downstream specialization of global lead firms, have opened new

possibilities for technological upgrading for the Southeast Asian local firms, integrated in value chains of GPNs. This possibility occurs because global lead firms can benefit from concurrent R&D, co-evolution of product/process technologies in their strategic partners. Meanwhile electronics manufacturers have been quick to capitalize on their established market positions and production know-how and they have emerged as manufacturing partners in the global electronics industry.

The emergence takes place in industrial clusters of high growth regions mentioned above. How clusters contribute to local firms' success in Southeast Asia? First of all local and regional institutional capacity in many regions has been strengthened introducing pro-business structures (Penang in Malaysia, Singapore), clusters are seen as solution to local and regional development attracting policy and public interest. Secondly e.g. in the global electronics industry, Singaporean firms are able to benefit from acquiring technological know-how and marketing expertise through accumulated experience supplying lead firms in clusters, e.g. in the hard disk drive (HDD) sector, the Singaporean local company MMI supplies Seagate, Western Digital. Furthermore it must be noted, that Singapore's infrastructural development, its attractiveness towards global third party logistics player plays an important role in the success as well. Singapore's HDD cluster contributed to become the world largest producer in the 1990s, in 2000 Seagate and Flextronics chose to locate its operational headquarters in Singapore. The Singaporean MMI – which started as OEM supplier of Seagate in 1989, today operating in geographical proximity to Seagate's R&D activities transferred to Singapore, participates in HDD product development right at the beginning of the product life cycle – enabling greater co-development product knowledge. On the other hand MMI and some Taiwanese firms opened one affiliate in HDD cluster of Thailand and one affiliate in personal computer

industry cluster in Penang, and three others in Johor, Malaysia to sustain price competitiveness.

Together with Singapore and Thailand, Penang is an integral part of the *Southeast Asian "golden triangle"*. After over three decades of active promotion at the federal and state level, Penang is now well placed in electronics GPNs, as host of several global lead firms, such as Intel, Dell, AMD, Hewlett Packard, Seagate. The Penang Development Corporations (PDC) plays a critical role in the development of the cluster not only by facilitating intra-firm networks in the electronics industry, but introducing IT into the supply chains of local firms and maintaining an excellent air hub with links to Singapore, Taipei and Tokyo.

Just like in the case of Penang and Singapore, the Thai government's supportive industrial and economic policies played a highly significant role in the formation and development of its giant automotive cluster. Development of sector-specific industrial estates, leadership role in regional cooperation initiatives have been important contributions to the success. Without embarking on a national car project, as Proton in Malaysia or Kia-Timor in Indonesia, they chose the strategy of plugging the Bangkok-Rayong region into GPNs of lead firms of the industry. In the cluster of 12 automobile assemblers, more than 700 foreign and Thai-owned first-tier suppliers benefit from a wide range of internal economies – such as lower transport and logistics costs and greater certainty in inter-firm transactions.

A third convincing case study of cluster economies was provided in Wang and Yeung's (2000) paper about Singapore's petrochemical cluster located at Jurong Island. While geographical advantages evidently played a role, but in the last three decades continuous supportive policies, conducive business environment were needed to establish and sustain its role as regional production and trade centre of international oil,

petrochemical and chemical companies. Under Manufacturing 2000, the Chemical 2000 study was completed with recommendations to enhance the chemical cluster and reinforce Singapore's position as chemical hub in the Asia-Pacific region, reaffirming the role of government in developing the cluster. The government invested S\$7.2 billion to build a chemical island, combining seven offshore islands of Singapore into a single landmass. (The combined output of chemicals and petro-chemicals accounted for 31.2 % of total output in Singapore's manufacturing sector) Exxon-Mobil and Sumitomo Chemicals contributed to the cluster development strategy. The reinforced attraction of Singapore as manufacturing base of the chemical industry is confirmed by new FDI projects realized in the chemical cluster. The Evonik concern headquartered in Germany erected a new manufacturing facility with a total investment of 500 million EUR in 2014 in addition to its already existing facilities there. (Annual Report Evonik 2013).

The interconnectedness of government's long-term strategy and the importance of cluster in realizing the strategy is well illustrated in Singapore's Living Digital Hub Initiative, elaborated in 2003 to be implemented by 2012, which aims at increasing the contribution of the ICT industry from 7 to 10 % of the GDP and doubling employment in the traditionally fastest growing service sector. The Vision and Strategy created in consultations between government experts and 130 industry participants envisage the country as a Digital Living Lab, where innovative, complex ICT solutions are created, tested, commercialized and deployed. The concept also included the creation of creative clusters, setting up centres for innovation and experimentation to enhance capabilities. These centres should focus on the research and understanding the way ICT technologies will impact the people live, work etc. They should be equipped with state-of-the art equipments and facilities, and will be accessible to individual firm, which financially could not otherwise afford such investments. (Singapore Living Digital Hub, 2012). The scope

was enlarged and in September 2015 was announced, that Sembcorp Industries' facilities will be Singapore's first industrial „living laboratory” for test-bedding water and environmental technologies. The company has entered into a partnership with the Economic Development Board (EDB) to grant firms providing these technologies access to its wastewater treatment and waste-to-energy facilities and use them to conduct research and development in areas such as smart water systems. They jointly invest USD 8 million for commercialization of R&D projects (StraitTimes 2015).

Empirical results regarding global production networks, clusters and development are showing also locational advantages in studies on successful development of taiwanese electronics outsourcing industry, as well. Yeung defined explicit and implicit coupling with global lead firms. Examples for explicit coupling, which is driven by local government initiatives between Taiwanese Original Equipment Manufacturers (OEMs)/Original Design Manufacturers (ODMs) can be found in Zu Suzhou’s notebook production computer cluster, while implicit coupling with bottom up dynamics associated with Taiwanese firms in the Dongguan’s desktop cluster. Similarly, Yeung et. al. (2009) confirmed geographically concentrated strategic coupling in three science parks in Taiwan. (Yeung, 2015:27).

Studies on China in this respect show a more nuanced picture. The study on the Chinese computer manufacturing industry concluded that the nature of strategic coupling between GPNs and regional product clusters varied depending on the functionalities of those clusters within the broader GPNs and „the way they were shaped by local institutional and economic context.”

However in certain cases regional institutions may mobilize their specific assets (if they possess), to bargain with the lead firm, not in an asymmetric power relation. This bargaining power is especially high, if „the region specific asset is complementary to the

strategic need of the lead firm". (Yada, 2009 in Yeung, 2015: 21). The concept of embeddedness in local environment is not confirmed by the Taiwanese PC investments in China, resulting in no substantial industrial upgrading over the past two decades, differently from other empirical experiences of TNC-driven clusters in other countries in East Asia. Yang and Liao concludes in their study that cross-border production network of Taiwanese PC investment in Dongguan is an exclusive network, characterised by closed backward linkages with pre-established Taiwanese electronics suppliers, thus with relatively weak ties towards local suppliers in the Dongguan cluster (Yang-Liao, 2009).

In a study conducted in 2004 on the successful Taiwanese electronics outsourcing industry, the question was raised for policy-makers and entrepreneurs in Taiwan, what to do next. How they themselves can develop lead firms from local firms with strong global brands and continuous innovation related to their products, approaching the markets they serve as outsourcing partner. Sturgeon and Lee delivered an explanation why the electronics industry in Taiwan could excel in some areas, such as large scale manufacturing and post-architectural design, while being unsuccessful in other areas, namely product definition, brand development, and new market creation. They claim that the new structure, the value chain modularity, allow these sets of functions to be efficiently coordinated among separate firms and separate locations, making Taiwan be a vibrant hub for component and contract manufacturing. Making the next step, developing higher value added capabilities such as branding and product strategy, was feared by EMS and ODM contractors and customers respondents of the field interviews of the researchers, as competing with customers, even in small ways, risks "killing the golden goose." To make a step forward, the authors suggested to encourage Taiwanese hardware start-ups to rely on the extensively existing contract manufacturing capacity in their neighbourhood, just like start-ups in the Silicon Valley, requiring an „idea first" instead of

„manufacturing“ first approach in setting up new firms. The rapid shift of production including employment to China urged the answer to the question raised. (Sturgeon- Lee, 2004: 41)

By now several Taiwanese enterprises have succeeded in taking the suggested step, they are today Original Brand Manufacturers (OBMs), multinational hardware and electronics corporations specializing in advanced electronics technology, such as Acer or Asus, 4th and 5th computer vendors on the world. In the early 2000s, Acer implemented a new business model, shifting from a manufacturer to a designer, marketer and distributor of products, while performing production processes via contract manufacturers. In addition to its core business, both Acer and Asus own giant franchised computer retail chains in Taipei. ACER provides e-business services to businesses, governments and consumers. The achievements of ASUS in innovation and product design resulted in launching the world's thinnest PC at the end of 2010 and their products were honoured by 4256 international prizes within one year in 2013. (Wikipedia, websites)

For further enhancing Original Brand Manufacturing, since February 2015, government negotiations aim at establishing Taiwanese industrial parks in India. The Taiwanese Ministry of Economic Affairs offered as part of the Make In India long-term economic development program a Taiwan-India partnerships based on an unique original brand manufacturer (OBM) model. According to the model, Taiwanese manufacturers will set up factories with Taiwan-developed technologies, while Indian partners market the products under Indian brands in different sectors, such as electronics, ship-building and textiles. (The China Post, 2015)

On the other hand multinationalization and extreme expansion was pursued also by those remaining specialized in contract manufacturing, such as the case Foxconn. Today the largest contract manufacturer, and the third largest IT company by revenue in the

world, Foxconn, employs 3-400.000 people only at its biggest factory in Shenzhen, China evoking however worldwide criticism for labour conditions there.

Both Singapore and Taiwan became worldwide positive examples of government policy fostering R&D and innovation, helping clusters to strengthen and creating science parks. As countries seek their ways out of the 2008 crisis a comprehensive study of the US Academy of Sciences puts the - which region, country will lead the knowledge-based, first economy in the 21st century - issue - even into security policy perspective (Wessner, Wolf eds. 2012). Another important Washington-based think tank to advise government policy, the Brookings Institute addresses the question of the missing middle. “Washington, in short, has for decades lacked what Karen Mills, Andrew Reamer, and Elizabeth Reynolds call a “middle” or “meso-” strategy—one that seeks to strengthen the institutions, networks, and regional economies that support business activity to address companies’ needs collectively, not individually, through relevant joint actions.” (Mauro – Katz 2010:7).⁴

South Korea’s special economic development trajectory creating “national champions” – chaebols has put earlier than its neighbours into the position of home country of lead firms. As discussed in the Asian academic literature, Samsung’s successful strategic move to change its GPN architecture earlier into modular governance, than any of its competitors in Asia, has resulted in its worldwide leading position in important sectors in the electronics and ICT industry. Samsung’s global production network also encompasses the V4 region, therefore it will be discussed in more detail in the following section.

⁴ They state positive US examples as well, such as for the “innovation economy” in Northeast Ohio, where more than 600 firms now comprise a biomedical cluster which grew at an annualized rate of 7.4 percent from 2003 to 2008 and in 2008 alone attracted \$395 million in venture capital and National Institutes of Health (NIH) funding. (Muro – Katz 2013: 13)

We agree with Komura however in the distinctiveness of international production networks in East-Asia, playing a decisive role in the economic development of the countries, and extensively covering the whole region. “Although we observe similar cross-border production sharing in the US-Mexico nexus and in the Western Europe (WE) – Central/Eastern Europe (CEE) corridor, they have not reached the level of development that East Asia has accomplished.” (Kimura, 2006: 326.)

Overview of Europe and Chances for Hungary

Even if the East-Asian experience with GPNs is exceeding developments in all other parts of the world, Europe has experienced a decisive impact of cross-border networks of international corporations following the East-West divide from the nineties, too. The process further accelerated after 2004, with the 10 new member states joining the European Union. The impacts on intra-industry semi-finished goods trade in the electronics, automotive and machinery industry, manifold increasing bilateral trade volumes in those categories within the Visegrad Four region in the first decade of the 21st century, are clear signs of this development (Magashazi 2014), based on the theory that intra-industry and intra-firm trade strongly correlate. (Ng and Kaminski 2001). These findings underline the intense inclusion of the V4 region into the Global Production Networks as well.

Simultaneously the emergence of clusters in Europe accelerated from 2000, as the Survey of the European Cluster Observatory clearly documents.⁵ The majority of the respondents had a regional character, while 13 % of the clusters already were claimed to

⁵ The European Cluster Observatory, launched in June 2007, is the most comprehensive database on clusters, cluster organisations, and cluster reports in Europe. It is managed by the Center for Strategy and Competitiveness (CSC) at the Stockholm School of Economics and funded by the European Commission's Directorate General for Enterprise and Industry.

be transnational (Viahka, 2012:8). Mark Muro and Bruce Katz calls our decade the New “Cluster Moment”, how regional innovation clusters can foster the next economy, as clusters are the locations most likely to deliver a new economy that is export-oriented, lower carbon, innovation-driven, that through a combination of higher productivity and collaboration further enhance the development of high potential locations. The question of clusters came into light under deep uncertainty following the 2008/2009 crisis with the urgent importance of value-creation in local economies, whether high-tech or manufacturing. As global examples show clusters as public policy tools can create synergies and efficiencies without particularly high cost, ranging from the Silicon Valley technology cluster to the Vermont cheesemaking cluster. Thanks to clusters, firms, regions, and the nation are more productive than they might otherwise be. Policymakers and economic scholars around the world agree that the primary source of economic growth, competitiveness, and increases in standards of living in a globalized economy is innovation in the form of new products and services, more efficient production processes, and new business models. (Muro-Katz 2010).

The European Cluster Observatory developed in its 2014 report a mapping tool, by establishing so-called “Hotspot” indicators. It gives an assessment of the overall cluster strength across a region. Cluster strength is measured on four performance drivers: size, specialization, productivity, dynamism (latter measured by employment growth). There are still simplifications in the new extended mapping tool e.g. it has to consider which data is available comparably in Europe, thus it measures productivity by wages per employee.

For cross-sectoral clusters in the 10 emerging industrial categories⁶ defined, hot spots are generally found in certain Western-European regions: Ireland as a whole, South-

⁶ The 10 selected emerging industries cover 22 % of employment and 35 % of payroll in Europe, average wage, average wage and value added is higher than for the economy, outperform either in growth or productivity. They include advanced packaging, biopharmaceuticals, blue growth industries (new islands

France, Cote d'Azur, the Stuttgart area, Oberbayern Area, South Sweden, Helsinki area, and in capitals like Berlin, Vienna, and alone from the V4 region only the Budapest area (Central-Hungary). In general they are Europe's traditional economic centres, or Europe's innovation leaders – Scandinavian and Baltic hotspots and some urban centres, which are able to overcome the burden of the weaker surrounding environment. (European Cluster Panorama 2014: 14).

Best practice examples in Europe

Given the good country size, FDI-driven development comparison to Hungary, it is worth dwelling into the Irish cluster experience and the factors behind its outstanding ranking in the top 10 emerging industry for the country, as a whole. The Irish development policy has been considerably reshaped in the 2000s with the focus to move from FDI-driven export economy to knowledge-based economy”, thus from FDI-driven, efficiency-seeking growth to innovation-led growth, prioritizing two main focus industries: information technology and biotechnology. The vision was consequently communicated and within a decade put into practice. They created and expanded the institutional background⁷ and modified all fields of the development policy accordingly. The expression cluster had its place in the strategy, however not in the traditional sense of industrial agglomeration, network of multinational suppliers, but as a tool of the innovation policy, creating knowledge centres, integrating academia-government-industry relations, as a part of the global value creation. The tenders for setting up clusters however did not force the industrial relations. Industrial corporations, SMEs had to be

of activity), creative industries, environmental industries, experience industries (SMEs in intersection of arts and business), logistical services, medical devices, mobility technologies.

⁷ Science Foundation created in 2003, which funded already in 2004 the Adaptive Information Cluster by 5,6 mio EUR to finance 5 leading researchers and their teams. National Institute for Technology and Management created in 1997.

involved not later than the third year from its formation, by the time first applicable results of the research teams could have materialized, increasing their lobby strength in the new cluster structure, when expanding the cluster towards the industry. The strategy did not prescribe which region should be involved, emphasized however that several “Centres of Excellence” should be supported in distant areas from the capital as well. (Szalavetz 2008).

An important conclusion behind the Irish cluster development experience, that there is strong correspondance between the “high road” economic development policy – fostering higher value added, knowledge and technology-intensive value creation and its realization by economic actors deeply embedded in extensive local networks. A research with corporate and government interviews gave in 2003 deep analysis of the very successful Irish Multinational Software Sector, came to the conclusion that thanks to locational elements – as discussed – above - multinational software corporations appear to be more embedded, however “factors internal to corporate networks are much more likely to influence individual firm embeddedness than strictly local influences”. (White, M.C. 2003: 31). Google has its European Headquarters still today in Ireland.

Another successful European cluster development trajectory in a similarly small size economy is the Clusterland⁸ in Upper Austria. Upper Austria is a “hot spot” of the mobility sector in Europe. (European Cluster Panorama 2014). Since 1998, Upper Austria continuously runs Strategic and Economic Research Programmes with clear focus of a new era of innovation policy.⁹ These programs provide also a continuous, long term

⁸ The author visited the newly formed automotive cluster in Linz in 1998, the first member in today’s network of clusters in Clusterland, with future stakeholders of the first Hungarian cluster, Pannonautoklaszter established in Győr, Hungary. The latter however ceased to exist around 2009-2011.

⁹ ‘Upper Austria 2000+ Strategic Programme’ from 1998 to 2003 with a budget of € 300 million to provide support for technology/R&D, trading and qualification and location marketing. ‘Innovative Upper Austria 2010’ in the period 2004-2010 with a budget of € 600 million covered R&D, professional qualifications, networks, the economic and technology location of Upper Austria and EU networking. Those areas

funding opportunity for creating and expanding clusters; supporting joint projects of cluster participants through which the region has become an European competence region of clusters – and network initiatives. Currently runs the program for Innovative Upper Austria 2020 and a special long term program for the mobility / logistic sector is designed till 2050. While a cluster initiative unites firms of a certain industry, network initiatives deal with crosssectoral themes, such as the Human resources, Energy efficiency cluster within Clusterland. The assessment report of the ESIC, European Service Innovation Centre of the European Commission finds the established clusters as a major strength of Upper Austria's innovation policy tools, which are still mostly in the manufacturing sector, e.g. automotive, mechatronics, environmental technology with permanently growing number of members. As of 31.12.2013 the nine clusters belonging to Clusterland had altogether 1927 members, with 288 600 persons employed. During 15 years 359 projects were initiated and successfully carried out projects in form of cooperation between cluster members – involving 6 to 39 member firms in one project.¹⁰ The trust developed in initial interactions during seminars organized by Clusterland followed by the own dynamic of cooperation of firms in joint projects integrating network participants is the region's major achievement today. As a step further, Upper Austria should focus on linking its manufacturing with knowledge intensive business services (KIBS) firms, furthering internationalization and servitization. It includes focus on creative industries, as nurturing people's creativity contributes to attracting and securing skilled professionals and preventing brain drain. (Janssen, Hertog and Kuissisto, 2014).

remained the core of the extended 'Innovative Upper Austria 2010+', with a budget of € 450 million for period 2010-2013.

¹⁰ Impressive dataset is shown on achievements in detail on the website of Clusterland

GPNs and clusters in the Hungarian economy

In the Hungarian case study we would like to combine the impact of GPNs, spillovers, possibility of upgrading with the activity of clusters. Gereffi argues that clusters are inserted into global value chains in different ways, which has consequences for enabling or disabling local-level upgrading efforts. (Gereffi 2011:35-37)

Following an overview of findings on clusters deriving from explorative research in the previous years, we give a rough assessment on the current situation based on own interviews with organizations involved in fostering innovation as well as cluster managers, owners/managers of cluster member firms.

The first Hungarian cluster, the Pannonauto Cluster was established in 2000 with the aim to assist automotive suppliers develop themselves internationally competitive, only two years after the Upper-Austrian automotive cluster started. The formation of clusters remained sporadic and individual subsidy driven till a real boom came about with specially designed topdown government development initiative – named Polus Program – in 2007, contributing with initial funding for creation of clusters. In two steps more than 200 clusters were formed in 2009-2011 country-wide. The second stage of the Polus program aimed at fostering joint projects among cluster members, providing for those generating projects funding for two more years, while the most advanced cluster tender envisaged the application of real innovation clusters. Experience shows, that most of those artificially initiated clusters could not find their strategy for sustainable future, after spending the subsidies received their activity was reduced, suspended or totally ceased. (Kocsis, 2012). The show case Pannonauto Cluster¹¹ used up its publicly provided funds

¹¹ The signing ceremony in March 2000 was attended in Marriott Hotel, Budapest by Prime Minister Orban, Minister of Economic Affairs Matocsy and general managers of the Hungarian affiliates of Audi, Opel, Suzuki. Szechenyi University of Győr and several suppliers directly joining as cluster members. Affiliates of large banks also joined to be around the promising initiative, originally started by the Pannon Enterprise Development Fund.

in the first years for cluster activities, benchmarking clubs and conferences. As sustainable financing could not be reached in spite of renowned TNCs, AUDI, SUZUKI, OPEL, LUK and large international banks among their funding members, the cluster moved to be integrated into the university, and ceased to exist a few years ago.

To overcome the problem of a large number of “dormant clusters”, a corrective government measure was introduced in 2010. As the first, and even today, the only country within the Visegrad region, a quality insurance procedure for clusters – the “accredited cluster” status - was introduced. It can be obtained only for 2 years and then needs to be applied for again.¹² The accredited cluster status ensures in case of certain tenders higher financial leverage for projects of the cluster members, however there is a condition to generate their own revenue through compulsory membership fees. This fact and the complex, detailed material required kept back many clusters from the application. The number of clusters with accredited status amounted to 18 in 2012, but grew to 34 by 2015.¹³ The accreditation of clusters will be reorganized from 2016, a new accreditation body, belonging directly to the government, will perform this task according to a new decree brought in July 2015. In order to follow the German model the currently accredited clusters created on 25th August 2015 will be known as the Cluster of Accredited Clusters.¹⁴ Whether it contributes to a new “cluster momentum” in Hungary, too, remains

¹² This learning most probably came from another economic development program, the “Industrial Park Title Program”. It was started by the government in 1997, which set as a condition for providing public financing to obtain the title. 28 already existing industrial parks received the title in the starting year, 1998, allowing also monitoring of their development. Today more than 200 such parks have the title and spent public funds for physical infrastructure. Several of them could not attract tenants as they promised, but no mechanism was put in place to withdraw titles.

¹³ According to stand March 2015, that time only 32 accredited clusters included 495 firms, employed 58.000 persons and produced 2500billion HUF revenue. In 2014-2020 financing period 2700 billion HUF will be devoted to network development, including clusters within GIOP- press release Balazs Rakossy, state secretary

¹⁴ Source: website of the National Research, Development and Innovation Office

to be seen. Several other non-accredited clusters still exist in the country, acquiring project revenues in order to survive.

Clusters in global networks

The empirical research investigated to what extent TNC affiliates are involved as cluster members in knowledge spillovers in the 18 accredited clusters in 2012. Only 4 clusters were identified out of 18 having TNC subsidiaries directly involved in the cluster. Three clusters¹⁵ were explored deeper with 11 structured interviews. (Kocsis, 2012).

Only one of the three clusters the Multimedia and Mobility cluster (MM Cluster), with 5-6 TNC affiliates and 44 SME members at the time of the interview, partly with the help of 2 billion HUF public funds from the Polus program for joint projects, confirmed that the TNC affiliates provide market opportunities for at least half of their SME members, even inputting the SME product into its global portfolio. Joint projects however involved only inter-SME relations. Besides the larger public funds, TNC affiliates contributed proportionally more to the financing of the cluster management (office, computer infrastructure, website development) than the SME members. The study underlined the conclusions of previous research, that foreign affiliates of TNCs still have only marginal role in the Hungarian cluster development on the level of active cluster membership. Where they are integrated, their reputations enhances the image of the cluster and channel up-to-date global industry trends, contribute to knowledge-transfer in those clusters. A major role is played by the cluster management with facilitating information flow between subsidiaries and SMEs through workshops, exploring development needs on one side and SME competences on the other side. The success of

¹⁵ a Mobility és Multimédia Cluster , az OMNIPACK Packagetechnological Cluster and the Software-industrial Innovation Cluster.

the clusters to regionally coordinate efforts of private and non-private actors, depends largely on cluster manager as well, how credible he/she is to overcome the mistrust, low level of cooperation intention of SMEs amidst fierce competition. (Sass and Szanyi, 2009). Those concerns explain why supplier networks of GPNs are usually not making the stage to transform themselves into clusters.

Many Western-European countries look back decades of clustering history already, even if the European Union acknowledged it as an important tool of economic development in an official document only in 1998.¹⁶ This might explain, that while surveying 382 European clusters, 13 % of them declared itself transnational (Viachka 2012), Hungarian clusters have hardly been part of transnational regionalization,¹⁷ thus not contributing to collaboration of V4 countries, too. Their role remained of local reach, within national borders.

Openness to international connections in the most advanced Hungarian clusters already exists, first cooperation agreements were signed with foreign cluster networks, including also Clusterland of Upper Austria, introduced earlier in this section. They mainly serve only the exchange of experiences, best practices and the theoretical possibility of joint projects within the EU.

Clusters and Innovation

Research on Hungarian clusters with empirical findings is still very sporadic, thus deep analysis on the impact on enhancing innovation capability of the cluster members

¹⁶ first declared in Competitiveness White Paper 1998 (Cowling 1999).

¹⁷ In the field different fields Hungarian organizations and organizations from other V4 countries joined a transnational networks, funded from EU 2007-2013 framework program, they have not reached their aim to become transnational cluster organizations (TCOs), achieved by a few Scandinavian and Western-European initiatives. (See Viachka-Walerud, 2012. Appendix 1. and 2.)

on a broader scope is hardly studied. A research commissioned in 2011¹⁸ encompassed the whole West-Transdanubian region, identifying altogether 33 clusters in the region. An innovation audit performed on eight selected clusters¹⁹ revealed the following:

- intellectual competence is given on the level of cluster managers, but scarcity of capacity (1, max 2 persons in cluster management), overburdened by administrative, documentation tasks
- source of innovation are mainly brainstorming workshops, intranet interface for innovative ideas with lack of capacity for implementation
- at least 5-10 years planning cycle with sustained funding would be needed to achieve results in innovation;
- four clusters had written innovation strategy – those had higher result in joint product development by members
- innovative capacity results were not measured; only one cluster could provide an example of joint innovative product development (together with a university)

Overview of the Current Situation Based on Desk-top Research and Interviews

The large euphoria of setting up clusters between 2007-2013, reaching a peak at more than 350 clusters, slowed down by 2015, many of the clusters are in the meantime dormant, others are fighting for survival. We found that a number of really successful cases can provide in Hungary best practices for cluster development. Here below we summarize our findings regarding a set of clusters representing different regions and industries to reduce industry, or region-bias of our findings.

Clusters pre-selected and included in the desk-top/interview based research:

¹⁸ The study was commissioned by the West-Transdanubian Pannon-Novum Regional Innovation Agency and carried out by Universitas Kht.Győr, interview with Tibor Dőry.

¹⁹ Three in Győr-Moson-Sopron, three in Vas and 2 in Zala county.

1. AIPA Cluster, Kecskemet
2. 3 P Printing Industrial Cluster, Kecskemet
3. Innoskart IKT Cluster, Szekesfehervar
4. Life Science Cluster Albert Szentgyörgyi, Szeged
5. MM Multimedia and Mobility Cluster, Budapest
6. North-Hungarian IKT Cluster, Miskolc
7. Pannon Creative Industrial Cluster, Zalaegerszeg
8. PANFA, Pannon Wood and Furniture Industrial Cluster, Sopron
9. Sopron Region Logistic Cluster
10. West Pannon Automotive and Mechatronics Centre

Seven out of the selected clusters have valid accredited innovation cluster status. Apart from PANFA, which was established in 2002 as the second cluster in Hungary, other clusters were set up between 2007-2011.

Due to reorganization of the wood and furniture industry, PANFA transferred its seat from Zalaegerszeg to Sopron and was reorganized in 2011 to achieve 39 members by 2015. A key element of revitalization of the cluster was the role of its university member, the country's leading university in the wood industry with advanced research laboratories, and dedicated support of one of its member Effix Ltd. in successful marketing of the cluster. Today it is the only accredited innovation cluster in Western – Hungary. Panfa received its title in 2013.

The Western-Hungarian clusters are less active in joint innovation, have difficulties to convince their members to pay membership fees to have at least the theoretical possibility to apply for accreditation. Their members however are very efficient in joint lobbying in special industry- or region specific issues towards public authorities. The Sopron Region Logistic Cluster achieved that their members can still use the border

passing Klingenbach towards Austria, which was otherwise closed down for trucks with weight limits introduced. The West Pannon Automotive and Mechatronics Centre, which functions as a cluster with its 42 member firms, and 2 universities achieved successfully lobbying to bring automotive engineering higher education to the local university. A dual higher education program was started in September 2015 in Szombathely, winning 80 new talents with high scores to the new faculty of the university. Among the cluster members, is the international first-tier automotive supplier, Luk, which has also been part of the in the meantime closed first cluster PANAC, discussed earlier. The above three clusters could maintain continuous activity and finance their cluster management.

The region has clustering attempts in emerging service industries, such as creative industries and ICT, which would fit well to the lower unemployment, and high living quality profile of many towns of the region bordering Austria. Such initiatives are the Pannon Creative Industrial Cluster and ICT cluster in Szombathely, Sopron. The Pannon Creative Industrial Cluster set up in 2011 with 30 members, is a good example of the network of local micro entrepreneurs and SMEs (marketing, product design, applied artists). Their customer base is also mainly locally oriented without large international company customer, or business opportunity on the Austrian side of the border. As no membership fees are paid and no funds are currently available for cluster management – their activity is weak. A general phenomenon, the low level of cooperation intention among industry participants, coupled especially among ICT industry SMEs with lack of confidence, hinders the proper information flow, joint programs as well. According to interview participants in spite of scarcity of financial resources and long term planning capability some clusters out of the 30-40 clusters of the region, thanks to very dedicated cluster managers, can find niches where networking, collaboration can bring value to its members. When new public tenders open, some of the initiatives are likely to revitalize.

One of the most successful Hungarian clusters is still the accredited innovation cluster, MM Multimedia and Mobility cluster surveyed already in a study in 2012 as discussed above (Kocsis 2012). The chairman of the cluster, manager of Ericsson and other powerful members, such as Telecom support the cluster, as they see strongly the value of networking with SMEs and start-ups with very promising development perspectives involving four universities and research think tanks. Knowledge-transfer, knowledge-diffusion regularly takes place within the cluster. Joint R&D projects are implemented within the network of in the meantime 70 members, tapping on the most developed Central-Hungarian/Budapest region's economic potential and provide examples for strategic coupling between TNCs and local service suppliers. This development offers today not only better revenue generation above the collecting membership fees for sustaining the cluster management, but it is a conscious effect to generate private financial sources such as bank and venture capital participation to support promising projects.

The cluster development in Northern-Hungary, a less developed region based on per capita GDP, and wage level, gives an example, that successful clusters plugging into global production networks as suppliers of services are not necessarily created only in most developed regions. Such a best practice example is the Northern Hungarian IT Cluster (NHIT). The cluster established by 5 companies in June 2007, achieved the accredited innovation cluster status in 2010 and has 41 members today. Its cluster management received the European Cluster Excellence Initiative Bronze Label Certificate in 2012. NHIT is a bottom-up initiative by the entrepreneurial sector in the field of informatics. The strategy is aiming at creating R&D results, to enable internationally competitive products and services. Among their members are successful local start-ups and SMEs. Some of their members, e.g. Evopro supplies large TNCs, such as Siemens, National Instruments with

engineering and ICT services. The innovative project idea of Basewalk Ltd. funded by two young entrepreneurs in 2009, received in November 2015 considerable subsidy amount from the Horizon 2020 SME Instruments Phase II frameprogram in ICT category to enable them to hire further developers and market their products internationally. Another successful SME Dolphio Technologies, is engaged in R&D in unique informatics solutions. The company started its operation in 2004, and won the first subsidy on an innovation tender in 2005. Since 2007, they receive students regularly from the Miskolc University for traineeships – currently 37 in a year to their 80 employees. They made it to the final round on the CEE-Global Impact 2014-competition organized by NASA and the Singularity University (established by Google) with their SignAll sign-speech-recognizing system. They have by now subsidiaries in Greece and Bulgaria. The cluster organizes several joint programs together with the university, summer university for the students to ensure the continuous talent pool for its members. The success of NKHT is not an exception in Miskolc, they have another successful cluster in nanotechnology, as well.

NKHT formed a network with the five other Hungarian accredited ICT clusters to achieve better interest representation of the ICT industry. Another accredited innovative cluster is the Innoskart IKT cluster in Szekesfehervar. The cluster management received in 2014 the European Cluster Initiative Silver Label Certificate, first among CEE clusters. In spite of success, their capacity for cluster management is also limited, financial means for joint projects are sporadic – their role is not coherently considered in the regional economic development.

Finally, the region around Kecskemét has got a considerable new impetus by the decision of Daimler to locate its new production facility there. The local government together with the local high school and several other public organizations interested in local economic development started a top-down initiative to create two clusters to

maximize benefits by attracting new suppliers, upgrade capabilities of domestic companies of the region. Both AIPA and 3P Cluster established in 2010 show continuous development in assisting to match the competence level of their local firms with the need of Mercedes. According to the interview partner, 30-40 successful intermediation to supplier position was achieved during the past years thanks to the activity of the cluster. The acquired intermediation expertise of the cluster management was used, as well, when several Suzuki suppliers were successfully reoriented to Mercedes during Suzuki's cutting back production volumes. 3P cluster can boost of common innovative product development of their cluster members, too. Three clusters with their seat in the city of Kecskemet formed a network of clusters of 100 member firms mutually benefitting from each others' services. The enlarged cluster network provides better negotiating position when signing cooperation agreements internationally.²⁰

In Southern Hungary the Szeged region cluster development benefits from high level university and research partnerships. The Szeged Biological Research Institute is also among members of the Albert Szentgyörgyi Life Science Cluster (till summer 2015 named Goodwill Biotechnological Cluster) encompassing 27 members and having obtained accredited innovation cluster status for the third time this March. The Szeged University plays central role in the Szeged Software Industrial Cluster as well showing good cooperation results among their mainly local SME members.

Conclusions and Policy Recommendations

The international environment is rapidly changing effecting our region as well. On the governance side, global value chains are becoming more consolidated. Large TCN

²⁰ Such agreements exist with Clusters in Linz, Graz, Vienna and Norther Italy.

manufacturers, retailers are claimed to need fewer, larger and more capable suppliers, and they want to operate in a reduced number of strategic locations around the world. This is likely to promote a higher degree of regional sourcing letting room for smaller regional suppliers, given the fact, that small countries concentrate to devise policies to enhance their own capabilities to foster development. (Gereffi, 2011: 34-36)

FDI-driven economic development within global production networks characterize both the Southeast Asian and the V4 emerging economies, with much longer history and wider experience in the SEA region. Analysis of developments in bilateral trade relations of the V4 countries confirmed increasing reorientation towards each other since the EU accession, driven by their integration in TNCs global value chains. Studying developments in the East-Asian region, we suppose, more concentrated efforts would be needed to enhance the competitiveness of our region, utilize its locational advantages, skills and competences in geographical proximity – among others by fostering the creation of industrial/business clusters to move towards knowledge-based economy. This is creating the local “buzz” to global developments.

Researchers on different continents search for ways to increase local competitiveness through regional industrial policy. There is a broad agreement that most enduring base for competitive advantage can only be grounded on localized capabilities to increase firm-specific competencies (Maskell and Malmberg 1999: 172)

The extensive research program of the US Academy of Sciences defines a set of core general principles when pursuing cluster-based economic development strategies which is worth considering in our region as well. We select the major ones, that we also see appropriate to the Hungarian development:

1. Cluster initiatives should only be started where clusters already exist. It justifies that an industry hotspot has passed the market test (bottom up approach).

2. Data and analysis on strict empirical data should serve to track performance and target interventions.
3. Cluster initiatives on clusters should be focused where there is objectively measured evidence of under-capacity, to upgrade the identified cluster by attacking specific documented constraints, institutional deficiencies, or resource shortcomings
4. Maximize impact by leveraging cluster-relevant preexisting programs and initiatives. (R&D, SME support, training programs)
5. Align efforts “vertically” as well as horizontally.
6. Let the private sector lead. Clustering is a dynamic of the private economy in the presence of public goods. (Mauro-Katz 2010: 6-7)

There is a widespread view among economists that growth and development in the 21st century will be spearheaded by Asia, thus business relations between the especially fast-growing East-Asia and the EU has increasing relevance in the mid-term state investment promotion and corporate marketing strategy in the V4 region, too.

Best practices from East Asia and Western-Europe with previous empirical findings and interviews on the Hungarian development provides the following industrial policy relevant conclusions:

- Clusters should be created mainly in bottom –up process, by common interest of entrepreneurs of a region, identifying the so called “hot spots” of the given sector or activity.
- Clusters can enhance locational advantages of member firms, foster their upgrading capabilities through benchmarking clubs, knowledge transfer and diffusion.
- Improving innovation capabilities of cluster members, fostering their interactions should go hand in hand with a national, regional and local innovation policy.

- Successful development of innovative clusters presumes long-term (10-15 years) consistent „high road” economic development policy and innovation strategy, without regular changes, which enables cluster management organizations to plan their sustainable development and innovation strategy independently on the long run as well. The fact that sometimes even within the same parliamentary election cycle the government support system changes twice is one of the main hindernis, which contributed to the result that out of hundreds of clusters appr. 15-20 can be regarded as really successful today in Hungary.
- Innovative, expanding clusters are internationally deeply involved in the regional economic development strategy e.g. Burgenland, Linz, and for the first 10 – 15 years are financed by regional institutions. Strong stakeholder approach from not only regional but local institutions as well would facilitate better embeddedness of clusters and its member firms together with their TNC or domestic clients. We note here that this development should involve public and the private sector in an even policy network architecture, without top down approach.
- The “missing middle” or “meso-” strategy — could strengthen the institutions, networks, and regional economies that support business activity to address companies’ needs collectively, not individually, through relevant joint actions. (Muro-Katz, 2010) It could contribute to more even power relations even in quasi-hierarchical governance model of TNCs webbing the CEE region.
- Prime focus on education, R&D and innovation in general economic policy of the countries is indispensable to create such locational advantages which achieve higher embeddeness of Global Production Networks through condusive environment for their affiliates and offer offer of high-value added unique, often cross-sectoral services by innovative domestic firms of the region.

There are a few individual promising examples in the meantime, suggesting that Hungary could be able to capitalize on the potential of the “New Cluster Moment”, and achieve better upgrading possibility domestic affiliates of TNCs, local SMEs and the economy itself within GPNs. It remains to be seen, how public financing under GIOP programs and targeted national, regional and local government strategies coupled with strategic initiatives of foreign and domestic firms in the 2014-2020 EU cohesion policy period can activate this process and embark on a development trajectory outlined in this paper’s international examples. The Hungarian empirical developments offer a still scarcely researched area, even more the interconnectedness within the V4 region and can be explored deeper in future studies. It is a time-consuming research process, as limits to developments, individual best practices can be explored currently only in extensive qualitative research in this field.

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Pannon-Novum West-Transdanubian Regional Innovation Agency, Szombathely
Samsung Electronics Hungary
KOTRA
Webmark, Szombathely

Examining Meso Corporations: Recent Status and trends in the world of the top Meso corporations

Andrew Black

Introduction

The purpose of this paper is to look at an important sample of meso corporations, namely the very largest of them all²¹. In this section the top 100 non financial meso corporations are examined, together with a smaller number of top financial meso corporations. The overall sample is around 130 entities in size, with small variations depending on the year. The core group of non-financial corporations always consists of 100 companies.

The analysis of the top 100 corporations made here is similar in scope to asking the question, who are those people sitting in the first class compartment of a train, or who are occupying the executive lounges in a top grade global airport. All the comparisons refer to the select group of the top 100 meso corporations, and information is shown on which economic sectors they are active in, what parts of the world they are based in, and how this changed since 2003.

As part of this analysis, a crude “market” share figure is shown summing the value of this groups’ sales, and comparing this to an equivalent estimate of the global economy measured as global GDP. This is estimated to be equivalent to around 12 to 15 % of global GDP. Their share of global corporate output is around 50%, an impressive total. This provides us with a headline top level view. What is not discussed in the paper is the more detailed question of how significant this group of meso corporations are within their own designated industrial, and commercial sectors. This will be discussed elsewhere.

²¹ Measured in terms of annual turnover in current US dollars.

The aim of this paper is to consider what changes have been occurring in this select group of large, global, corporations. They can be described to some extent as the “winners” in their respective competitive races. The reason for saying this is that large meso corporations have a number of features that make them different from their smaller competitors. The following is a non-exhaustive list of special features of meso corporations that are believed to exist:

- Persistence and longevity. Meso corporations are generally able to weather storms, wars and depressions, and thus survive to enjoy the benefits of prosperity when the business cycle enjoys an upswing
- Meso corporations can adopt longer investment horizons, and look for longer pay back periods on their investments. They may be able to hold investments for the duration of a physical resource, such as an oil field or a metal ore mine.
- Their very size gives them advantages in dealing with governments. They may co-determine safety, health, labour law and taxation standards
- Meso corporations are able to arbitrage different national fiscal regimes, and frequently play one off against the other, including the use of low tax regimes and tax havens.
- Meso corporations, sometimes, have made credible threats regarding re-location, if they are unhappy, or disagree with the domestic policies pursued by a national government, irrespective of what type of government.
- Meso industrial corporations can deal and negotiate with meso financial corporations on more equal terms. They are important issuers of debt. Their equities are regarded as stable (low beta), and through stable dividend policies, can sometimes be regarded as proxy “bonds” for some classes of investors.

- Meso corporations have access to governments, and can exercise influence over government in many ways, varying from the open and transparent, through to more discreet and obscure transactions.
- Meso corporations are conscious of their social impact, and when operating abroad, frequently have to be careful to comply with local rules and regulations. They have to be seen to doing the right thing, and there are benefits in being “good corporate citizens” where possible. This can also transfer real social benefits to recipient countries
- Many Meso corporations are state owned, or started out life as state owned enterprises (SOEs). SOEs do not follow profit maximising behaviour, and can choose to maximize a number of target variables, including sales, employment, or in reaching a combination of social and financial goals simultaneously.
- Meso corporations also have to tread carefully in order not to trigger actions by anti-trust authorities when their market shares become too dominant. This occurs when meso corporations merge, or take over other, smaller, enterprises.
- Some meso corporations act as de facto and de jure monopolies or monopsonists, often with express support from their local governments. Again, this gives them privileges denied smaller competitors
- This can also provide some meso corporations with price setting powers in particular markets. For reasons explained below, there is some evidence that pricing power/price setting by meso corporations is becoming weaker and less frequent as their markets become more globalized
- Large meso corporations are uniquely situated by their very size, in being able to acquire other, substantial corporation, thus preserving their market positions, and adjusting to new market conditions and circumstances. In this they are aided and

abetted by meso financial corporations, including pension funds and other institutional investors²²

When examining the meso corporation lists from Fortune, the average meso corporation was included in the Fortune 500 list for the last 17 years. The median value was 21 years, representing the maximum number of years possible. There are several meso enterprises that are now well over 100 years old, and show no signs of decay or decrepitude. For the moment they appear to be “immortal” – something omitted in most economics text books in discussing competition and the theory of the firm.

For the purposes of this analysis two different data sources were used, and data is available for 3 years. The first data source is the Fortune Global 500 listings. Two examples have been used, one using data from 2014 and the other using data from 2007. The second data source is from Unctad, who occasionally publish material on their top 100 corporations. The reference year is 2003. The most comparable data comes from comparisons of revenue (turnover) development. This covers the largest number of years, and so helps to establish trends. Some other comparisons are possible, using data on assets, employment, and for 2014, profits. The Unctad material includes details on the exposure of these meso corporations to foreign markets, and some analysis is included towards the end of the paper.

The Choice of Years and Some Macro Considerations

The years chosen for this exercise are not selected at random. The most recent year (2014) represents an example of the post financial crisis environment. This is compared with 2007, representing the last year before the financial crisis, representing the top of

²² At the moment these are mainly assertions. During the rest of the book evidence will be supplied to support these contentions.

the business cycle. These two years use the same source, the Fortune 500 lists, and these contain information on both non financial and financial meso corporations. The 3rd study is from 2003, published by Unctad in 2007. 2003 is important since it was the year when the dot.com bust finished (equity prices reached their nadir in March 2003), and it was also the year of the invasion of Iraq, which many thought would unsettle the financial and industrial markets. In fact it went on to usher in the “great moderation” of low inflation, low interest rates, and reasonable growth rates across the world.²³ Hence, in a limited way, comparisons between these years will reveal how these large macro economic changes have affected the sample of the largest global corporations. And as will be seen, it has not left them unscathed, although in a manner that is not immediately obvious.

There are two other large “macro” factors that have clearly left traces through the ranks of the top 100 meso corporations. One of these has been the persistence of high oil prices in the global economy, which has clearly benefited meso corporations in the oil and gas industries. 2014 is the first year when oil prices fell dramatically, the full impact of which will only be revealed with the release of new figures for 2015. The second major macro factor has been the emergence of China on the world markets. This process is less straight forward than is generally realized. There was an initial period where China invited foreign corporations, many of them meso corporations, to establish operations in China, taking advantage for China’s then low wages. Government action, particularly in relation to establishing economic trading zones in coastal areas, plus government control over labour, resources, and other crucial inputs provided a stable political and social framework for foreign and domestic investors.

²³ And it has been argued that it was the “great moderation”, sometimes also called the Greenspan “put”, that created the conditions for the flourishing of CDOs, and the construction of the vast pyramid scheme of derivatives based on easy mortgage lending in the USA and to a lesser extent in the UK.

Large meso corporations saw in this two opportunities. One was use China as a base for exports back to their home regions/countries, thus providing them with a competitive advantage there. The second opportunity was to access the domestic Chinese market, that was effectively “virgin” territory, and was still protected by tariff and non tariff barriers.

During the early part of “noughties”, there was a considerable re-location of manufacturing activity by Western firms, to China. And this resulted in a rapid rise in China’s share of global output, and global exports. China, in so doing, also became the main import market for raw materials, metals, minerals and oil. In terms of crude output figures, China has already overtaken the USA as the world’s largest producer, an historic change.

One of the impacts of the Great Financial Crisis (GFC) in 2008 was to interrupt the twin digit growth in exports and in Chinese GDP. This led the Chinese government into a very large project of Keynesian fiscal expansion, to maintain this 10% plus annual growth rate. And this was done, conventionally enough, by encouraging enormous investments in housing, transport, infrastructure, and in additional industrial capacity. This, in turn, benefitted large numbers of Chinese meso corporations, many of whom have entered the ranks of the Top 100 industrial firms in relatively large numbers. This displaced older established companies in other regions, who have found themselves outclassed in terms of output growth. The figures for 2014 show this trend fairly starkly. The full implications of this have yet to be fully felt.

Preliminary High Level Conclusions

- The Fortune listings suggest that the top 100 industrial plus the top 30 or so financial meso corporations account for between 12 and 15% of global output.

- When the top 100 industrial and financial meso corporations are compared with global corporate sector (industry and manufacturing), their share rises to between 40 and 50% of output.
- Their share appear to have increased since 2003, peaking in 2007, and falling slightly thereafter
- Meso corporations in the West have become more internationally diversified, and are operating in more markets and product areas than earlier
- Concentration levels in developing countries show that meso corporations have a larger market presence there than in the older, OECD “metropolitan” markets.
- The top meso corporations are not spread evenly through the global economy, and they appear to cluster in a select number of industry/product groups. These are, in rough order of importance:
 - Oil refining and exploration
 - Automobiles
 - Retailing
 - Technology
 - Utilities
 - Health systems

Within these product/industry groups, State Owned Enterprises are found in Oil/gas, automobiles (China), Utilities. Indeed, in some areas, such as utilities, SOEs may be the dominant form of organization.

As indicated above, macro factors around the price of oil have clearly benefitted the oil and gas meso corporations. What is unexpected is the presence of large meso corporations in the “health systems” area. These are mainly US based meso corporations, meeting needs triggered by demographic developments, particularly in the elderly. These

corporations offer varying combinations of health delivery systems, health infrastructure, social care and medical practices, plus some insurance cover. One of the features of this area is that it requires initial investment to set up; there are clearly some economies of scale and scope, and the demand is likely to grow in the longer term – favouring longer investment horizons. Changes in government legislation, and other compliance issues, may also favour this industry.

What is striking about this list is the absence of, or the under-representation of large corporations in the chemicals, engineering, and metal “bashing” areas of the economy. Top meso corporations concentrate on mobility (automobiles), and on providing the means for this (oil) they concentrate on where consumer buy their goods (retail). They have large shares in technology, the utilities and in health systems.

In geographical terms the main results are:

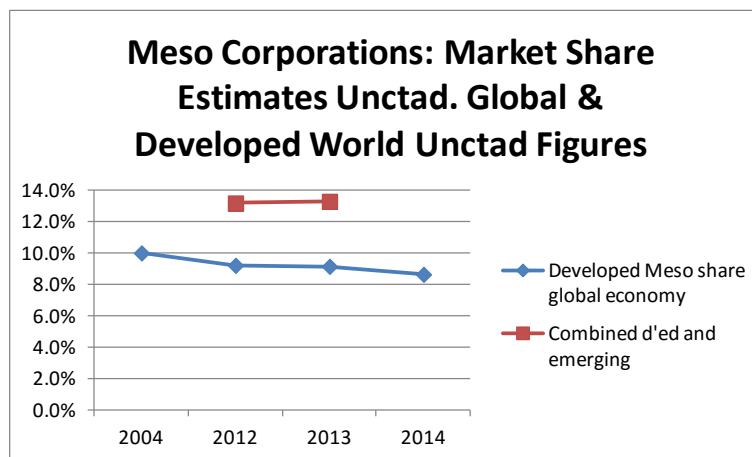
- The strong rise in meso activities in the AsiaPacific region, and in particular in China
- AsiaPac has now overtaken the EU as the second largest area of meso activity
- The fortunes of top meso corporations in the EU appear to have declined. This is related to stagnant or falling domestic demand, largely due to austerity policies pursued by EU and Eurozone governments. These would appear to harming the competitiveness of their domestic meso corporations.
- Meso corporations from Africa and the MENA regions are largely missing from the top 100 meso corporations. The only companies within striking distance of being included here are from South Africa.

- Meso corporate activity in South America and South Asia is low. It is increasing in South America. ²⁴

Top Meso Corporations and the Global Economy

Chart 1 compares the size of the combined turnover of the Top 100 Meso non financial corporations and the size of the global economy (GDP). The chart shows that the combined share in developed and emerging markets was in the region of 13% between 2012 and 2013.

Chart 1



Source: Unctad

The meso share in the developed world is lower. The meso share fell from around 10% in 2004 to just over 8% in 2014. In our view this appears to be quite a large number.

Table 1 shows the share of industrial, non financial, meso corporations, as well as the combined share of financial and non financial Top 100 corporations compared with the size of the entire corporate manufacturing sector for the global economy. This

²⁴ Readers are reminded that these results refer to the shares of meso corporations in the top 100 meso group. There are other meso corporations active in regions like South America, that are not large enough to be included in the top group.

examines how GDP is produced, where the world is split into output from agriculture, manufacturing and services.

Table 1 also compares the results from two sources, Unctad, and the Fortune 500 listings. The former include only non financial companies, while the latter include both financial and non-financial meso corporations.

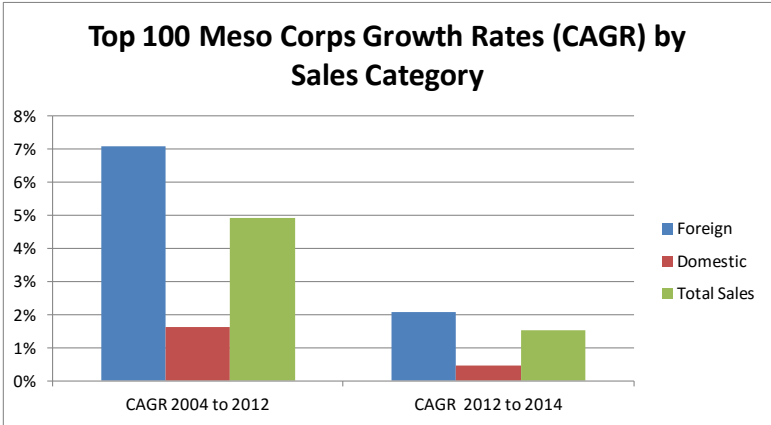
Table 1. Meso Shares in global corporate output

	2003	2004	2007	2012	2013	2014	Source
Meso Share Non Financial & Financial Corps Fortune	29.5%		55.3%			50.5%	Fortune 500
Meso Share Non Financial, Top 100 Fortune	29.2%		43.3%			39.8%	Fortune 500
Developed World Meso Top 100 Unctad		32.0%		29.0%	29.0%	27.0%	Unctad
Developed &Emerging Market Meso Share Unctad				42.4%	42.8%		Unctad

Table 1 shows that after a rise between 2003 and 2007 (the last year before the General Financial Crisis (GFC), the overall market share fell slightly to 2014. The combined share is above 50% of global manufacturing output.

The Unctad²⁵ data for both emerging and developed markets show that the meso corporate market share stayed relatively stable at between 42 and 43% of global manufacturing output between 2012 and 2013. The equivalent manufacturing figures for Fortune show the Top 100 meso share at 43% in 2007, falling to 39.8% in 2014. The similarity between these two sets of figures from two different sources leads us to think that the share of the top 100 non financial corporations is around 40% of global manufacturing output, and when combined with the largest financial meso corporations, this share rises to around 50%. These ratios are large enough to indicate that the meso sector may well be able to exercise some market and pricing power over their smaller rivals, and that they have dominant market positions.

Chart 2

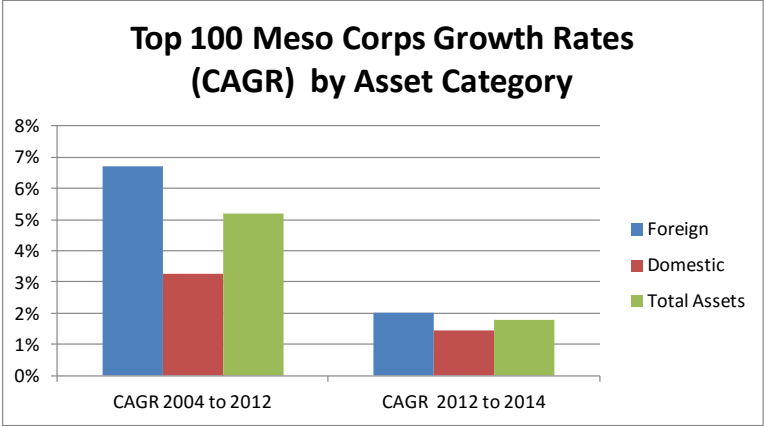


Source: Unctad & authors calculations

²⁵ United National Trade & Development Agency, based in Geneva.

Chart 2, using Unctad data, looks at how the Top 100 Meso corporations (non financial) have grown in the pre and post crisis periods. and separating out domestic and foreign sales trends. The chart shows that foreign sales grew faster than domestic in both pre and post crisis periods. Post crisis growth rates are much lower, and domestic sales barely grew at all for the Top 100 Meso firms between 2012 and 2014. Foreign sales that grew at a CAGR of 7% pre crisis, only managed to grow at 2% pa after the crisis. This shows that the top 100 meso corporations have become more diversified and have grown faster abroad than at home.

Chart 3

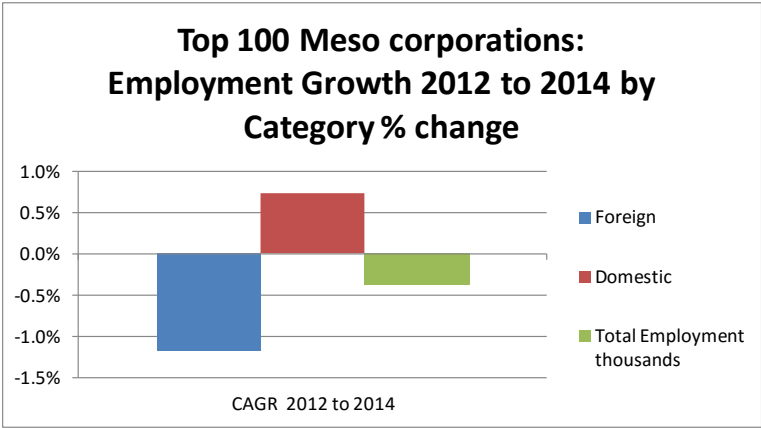


Source: Unctad & author’s calculations

A similar pattern can be seen in the growth of assets in chart 3, a consequence of either direct investment, or M&A by meso firms. As with sales, growth rates post crisis are much lower than before 2012. In the pre crisis period foreign assets grew much faster than domestic assets, this differential shrank post crisis. Asset growth in foreign markets has slowed more noticeably relative to domestic asset growth. Both turnover and asset growth fell after the crisis. And the differential between foreign and domestic markets fell after the crisis. Foreign markets were rather more volatile than domestic markets for the top meso corporations.

Chart 4 shows how employment growth rates developed after the GFC:

Chart 4



Source: Unctad & author's calculations

Total employment by the top 100 corporation shrank between 2012 and 2014 by around a negative half a per cent a year. Meso corporations still account for 16.8 million employees across the world. The decline in overall employment obscures a growth in domestic employment of around 0.6% pa, and a larger fall in foreign employment of around -1% pa. The reason for this is not entirely clear. It may be that efforts to rationalize production have been accompanied by moves to reduce the importance of national subsidiaries, and to extend product based organization into foreign markets. There may also have been efforts to seek greater scale economies by concentrating production and administration at fewer plants/sites. This could also reflect the growth of the internet making it easier to exercise control over operations from a distance.

Chart 5 shows Meso market shares % of Global GDP Current Prices:

Chart 5

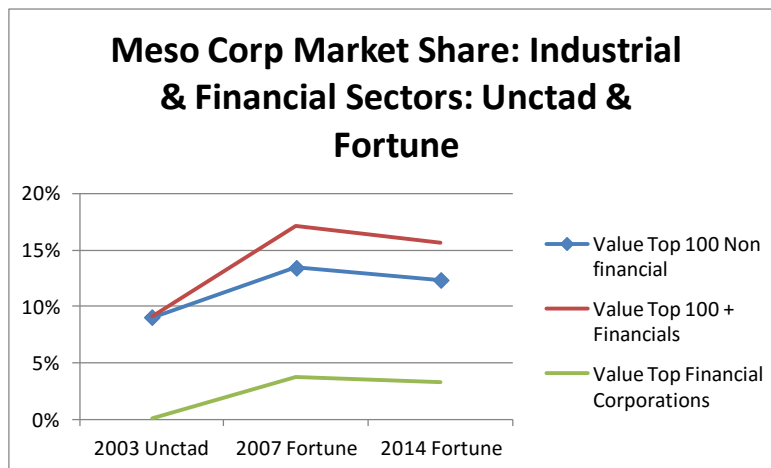


Chart 5 combines the Unctad 2003 figures with those from Fortune. The chart also distinguishes between industrial and financial meso corporations. The years also differ slightly from the previous chart. Here there is a clearer pattern. The combined total for meso industrial and financial corporations is over 15% of the global economy in 2007 and in 2014. The industrial share is around 12%. The low share accounted for by the financial corporations in 2003 is also striking. The meso market share appears to have fallen slightly since 2007. This suggests that both groups were negatively affected by the GFC. As we shall see below, there is additional evidence that the down turn in banking was stronger than that shown here.²⁶

These charts suggest that the meso sector also experiences turbulence and volatility. The GFC did not provide an opportunity for meso corporations to strengthen their grip on the economy. If anything, the impact of new competitors lower down in the listings may

²⁶ Note, although the estimated share of top financial corporations in 2003 is very small. It is not, in fact, zero.

have increased competition in a number of product areas since the crisis, and therefore held back sales growth.²⁷

On the basis of this evidence it is reasonable to conclude that the meso sector of the largest 100 enterprises (by sales) combined with the largest financial meso corporations have a combined global market share in the region of 15%, with some fluctuation around this. When compared with the size of the global manufacturing sector, the top 100 corporations have shares around 42% for non financial corporations.(see table 1 above).

No tendency towards the longer run wholesale monopolization of commerce and industry, as implied by earlier theories on State Monopoly Capitalism, can be observed. And as we shall see below, meso corporate activity is clustered in specific industries.

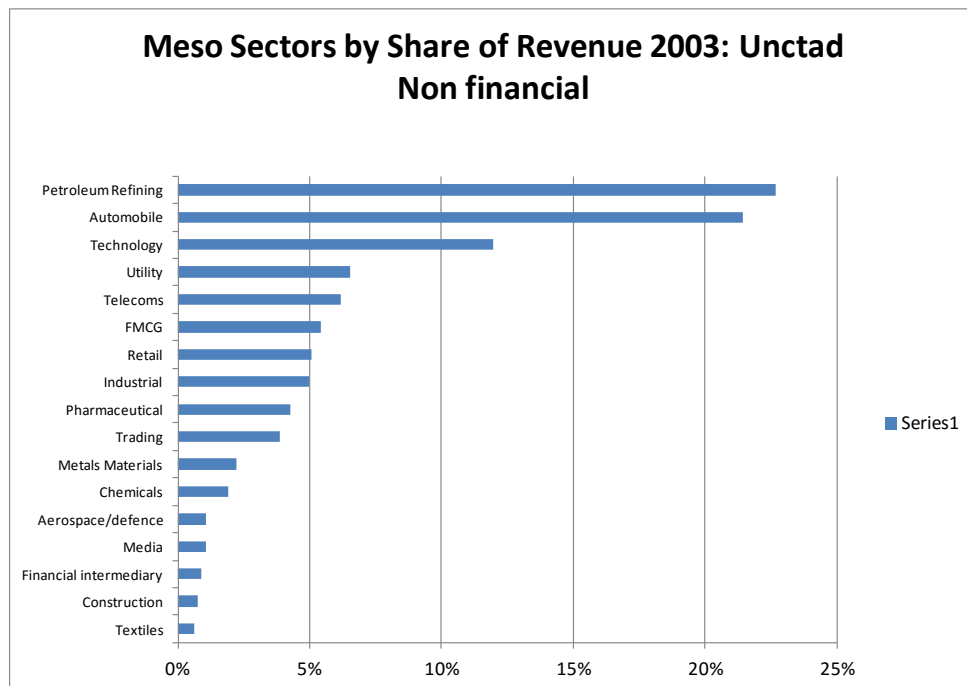
Product Clusters: Meso Corporations: The Product/Industry View

There is a skewed distribution of meso corporations, and some product/industry sectors are populated by more meso firms than others. Chart 6 provides an analysis of the most important sectors where meso corporations in the top 100 industrial companies are present. The sector description are close to the US SIC system. There are some adjustments to suit the nature of those corporations, not fitting neatly into pre-determined product/industry codes.²⁸

²⁷ In the UK, the long established hierarchy in the grocery business challenged the fortunes of meso groups like Tesco and Sainsbury – the former being in the top 100. Tesco’s performance suffered from incursions by discount stores like Lidl and Aldi – both of whom are privately owned meso corporations in their own right – but not included in the top 100 list.

²⁸ Fortune 500 lists contain both a 2 and a 3 digit description of what each company does. However, these also do not follow the SIC conventions. The product groups shown here are a compromise between the “official” and unofficial views. Our aim being to provide a bridge between the two statistical sources.

Chart 6

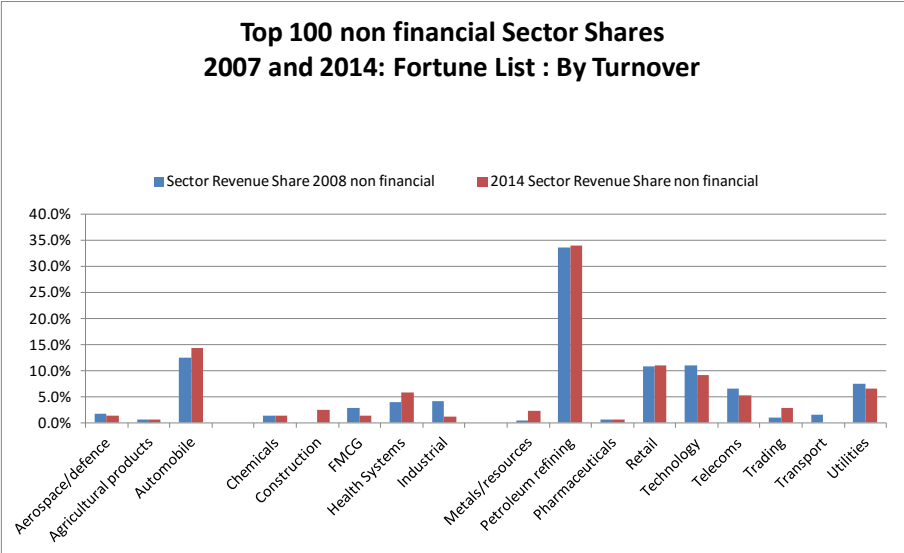


In the manufacturing view, the three largest product groups are **Petroleum & Refining**, referred to elsewhere as the oil and gas industry; **automobiles** – including the production of both passenger and commercial vehicles, as well as some ancillary equipment such as tyres; technology – this ranges from computers and software, through to electrical machinery, and consumer electronics; **Utilities** defined as the suppliers of water, gas and electricity, include both producers and distributors. **Telecoms** includes both fixed line and mobile service providers; **FMCG** refers to Fast Moving Consumer Goods, and includes companies like Nestle, P&G and Unilever; **Retail** includes all manner of retailers, from grocers to more specialized suppliers and department stores; **Industrial** includes a range of heavy industry suppliers including both GE and Arcelor Mittal; **Pharmaceuticals** is self explanatory; **Trading** refers to large commodity traders and import/exporters of industrial and consumer goods. They are mostly found in the AsiaPacific region. **Metals and mineral** includes companies such as Rio, BHP and

aluminium producers; **Chemicals** is self explanatory, and includes both organic and inorganic chemical suppliers; **Aerospace and defence** is also self explanatory, as is Media. **Media** includes suppliers of newspapers, magazines, films and some on line services. **Financial intermediaries** refers to various SOE post offices that also have important financial functions, such as the Japanese Post office, home of huge savings deposits, yet included here by Unctad ! **Construction** includes those companies engaged in large infrastructure projects in rail, and in civil engineering. **Textiles** is the descriptor given to fashion houses by Unctad.

The Unctad rankings are similar to those observed in the Fortune 100 list. Chart 7 shows these meso clusters measured by turnover in 2007 and in 2014. These are shown in nominal current US dollars, so include inflation (if any). The great importance of **Oil & Gas** and **automobiles** stands out. Turnover in both industry/product groups rose slightly, more in the auto than in the oil and gas sector. Indeed, turnover in the largest, oil and gas sector, remained virtually static until 2014.

Chart 7

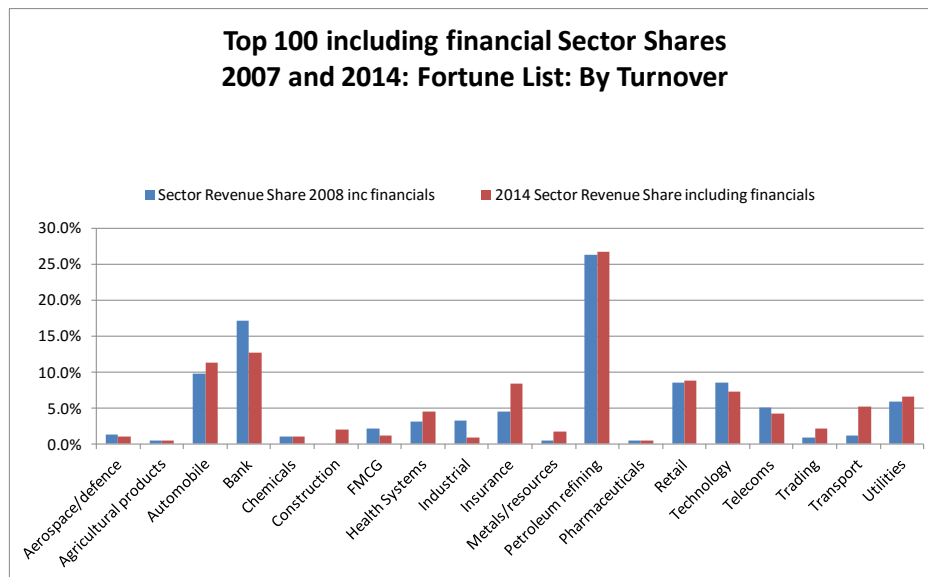


Turnover performance in retail, chemicals, also remained flat. Turnover increased in Health systems, Trading and in retail (barely). It fell in the other sectors. The GFC took its toll of meso corporations.

Chart 8 (below) shows the impact of including the financial sector in measuring meso activity. The two financial sectors are **banking and insurance**, here shown separately. They account for around 3% of global GDP.

Banking is the second largest meso cluster after oil and gas. As chart 5 shows, turnover suffered in the aftermath of the GFC, which cannot be said for insurance, where turnover increased quite rapidly. Why is this ? One likely explanation is that as incomes rose in developing markets, and particularly in China, insurance companies began to sell various life and other forms of cover – including more health insurance, thus leading to “good” times for the industry. The overall impact of including the financial sector is to slightly reduce the shares of the manufacturing sector. Chart 8 highlights the quantitative importance of the financial sector. As will be discussed later, the financial sector both lends to government, to business and to the household sectors. This enables the government and household sectors to consume more, and to alter the time pattern of their purchases. Banks also lend to the corporate sector, including the meso sector. As will also be discussed elsewhere, meso corporations have a high rate of internal funding, based on their retained earnings, and so are less dependent on the banking sector for future investment than is generally realized.

Chart 8



Relative Changes In Meso Product Clusters

Much of the information above is combined in chart 9 to give an idea of how the various meso product groups/industries have changed, relative to the entire group of the top meso corporations. The chart shows the relative changes in turnover growth rates between 2007 and 2014, compared with changes in the relative number of companies in each cluster. There are four quadrants in the chart. The top right quadrant shows those product groups where both the rate of growth in turnover and the increase in the number of companies is greater than the group average. Product groups in this quadrant are getting larger, and are producing more, and they are becoming relatively more important constituents within the meso corporation universe.

The bottom right quadrant is the “Competition” area. Here, there are more corporations, with below average increases in turnover. This is compatible with more companies competing harder for existing business. This could be a short term temporary phenomenon, as companies enter markets anticipating future growth that doesn’t

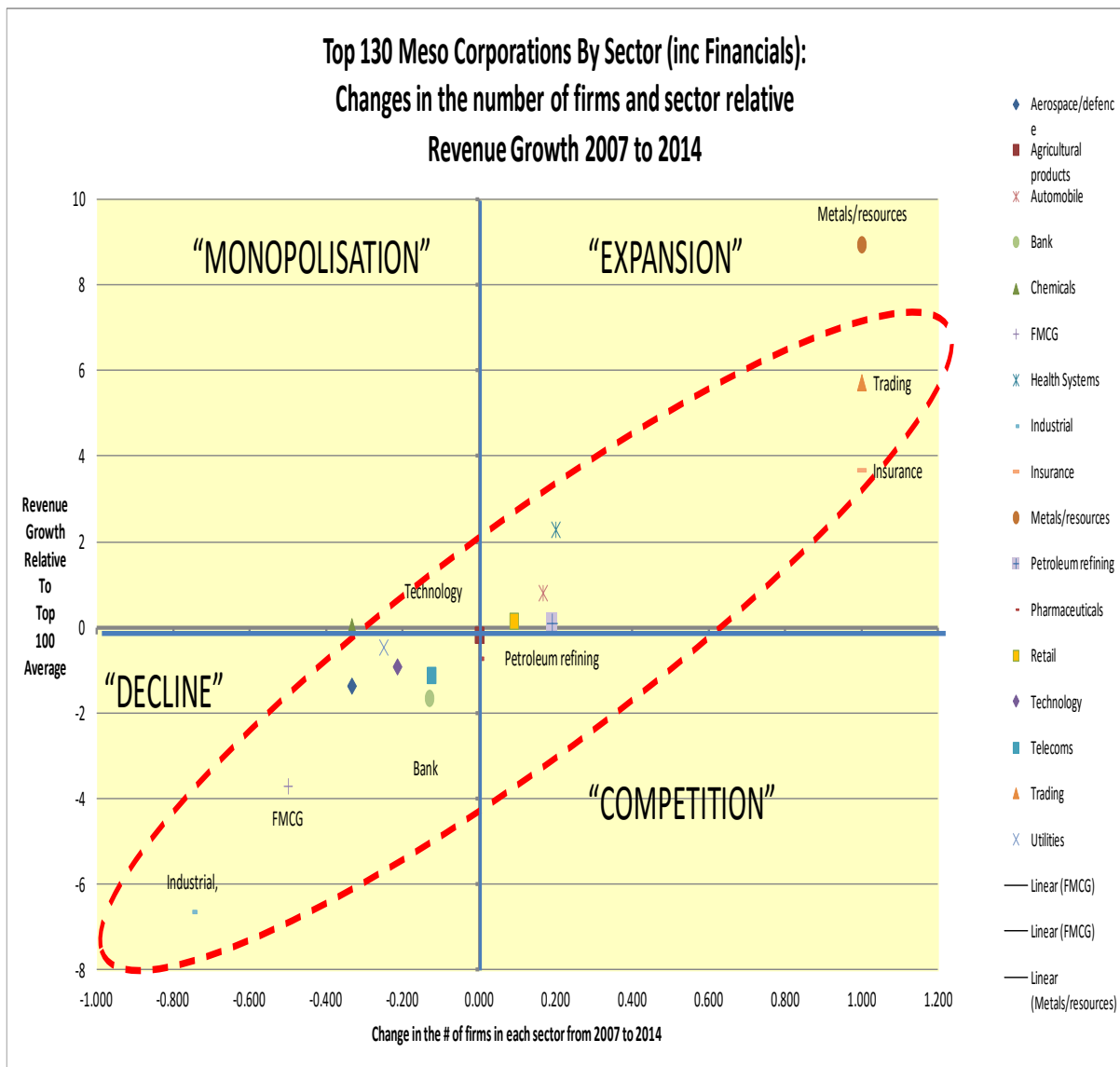
happen, or it could represent a permanent increase in competition that depresses prices, leading to lower turnovers. Pricing power in this sector would be weak.

The top left quadrant shows a trend towards increased monopolization. A smaller number of corporations operating with above average increases in turnover, possibly achieved at the expense of smaller competitors. And finally, the bottom left quadrant shows relative decline. There are fewer companies in this quadrant and their turnover has grown less, or declined more than the group average. Companies in this quadrant may well be suffering from changes in market structure, technology, and in pricing competition. Conditions may well be becoming more competitive, and the meso corporations are finding it difficult to find effective responses.²⁹

The red dotted line shows an approximate direction of change, with the observations being largely concentrated in quadrant 1 “expansion” or quadrant 3 “relative decline”.

²⁹ Readers are once again reminded that all of these changes are relative to the group of the top 100 corporations, and not to their position in their respective industries.

Chart 9



There are several product clusters experiencing expansion. Three have seen a rapid expansion in the number of companies, including **trading, insurance and metals/resources**. The fortunes of two of these clusters, trading and metals/resources were buoyed up by high commodity prices. Other clusters with above average turnover growth include **Health Systems, and automobiles**. Health Systems are reflecting demographic changes in the USA, and automobiles benefiting from income related demand expansion in the AsiaPac region (China).

Interestingly, there are no entries in the “competition” quadrant (quadrant 2). Although both retail and petroleum experienced increases in the number of corporations, with virtually static revenues.

Quadrant 3 is also empty, although chemicals is a close contender. All the other clusters are in the **fourth quadrant** “decline”. These **include industrials, FMCG, Telecoms, Banking, Utilities, Aerospace and Technology**. Banking is experiencing the negative effects of the GFC. Telecoms and utilities are experiencing downward pressures on prices due to technological changes; Industrials and FMCG are also experiencing increased competition, lower prices and turnover, with the result that companies in this cluster are dropping down the size scale, and are leaving the Top 100.

Does this make a difference? In the short run probably relatively little. In the longer run, as will be explained later, it may reduce the degree of self funding, increase reliance on external funding for any expansion, and may encourage cost saving, downsizing, and the sale of assets (divestments). This in turn will lead to further fragmentation in these clusters.

The presence of Technology in this quadrant is mildly surprising. It is most likely due to the broad nature of the cluster, and the fact that there are technological casualties as well as opportunities. Some of the Japanese corporations have been having a hard time managing the transition to smart phones, and other forms of cloud/internet interactions. This has affected the sale of equipment like printers, faxes, lap top computers, resulting in some of these suppliers leaving the ranks of the top 100.³⁰ Chart 9 shows that there are clear winners and losers within the group of top meso corporations

³⁰ A classic example being Nokia, which went from “riches” to “rags” in an unprecedentedly short period of time, having sold its formerly unassailable hand set division to Microsoft, before its value was written off entirely.

Conclusions on Product Clusters

Meso corporations are not evenly spread across the global economy. There are some sectors where they predominate, and look as if they will continue to do so for some time. There is something of an ebb and flow about these changes. Consider the oil and gas industry. It features prominently amongst the ranks of the top 100 industrial meso corporations, and is still the largest sector even when including banks.

Yet, there are important changes occurring in the industry. In a recent paper, Black (2012) pointed out that the privately owned meso corporations were running out of reserves of liquid oil. And these are not being fully compensated for by findings of new gas fields. While they continue to have the technological edge in exploiting hard to reach new resources under the sea, or in extreme conditions like the arctic, some of this edge has passed to the oil field supply industry, with companies like Bechtel, Schlumberger and Halliburton (not in the top 100) now taking on technological “ownership” of many of the trickier processes. Equally, the large oil multis have lost control of their down stream retail and refining operations. The previously highly vertically integrated supply chains have dwindled, although they remain largely in place for two of the more successful meso enterprises, Exxon and Shell.

State owned enterprises in the sector are also important, since they own extensive national reserves. They are beset by other issues too, including the need to meet a wider set of national policy targets on employment, training, and in some cases on the environment. The turnover numbers used here probably flatter the sector. As has been pointed out by Mainelli et al (), a substantial part of these companies’ valuation is based around exploiting hydro carbon reserves that may well never be used on environmental grounds. Financial markets have yet to appreciate this.

The other striking impression is that the “winners” do not immediately conform to meso level enterprises that one might have thought would have been there. The sectors showing the largest relative growth in numbers and turnover do not immediately fall into being the “commanding heights of the economy”.

Geographical Clusters and Regions

Just as the top meso corporations are not evenly distributed through product space, the same is also true for their geographical dispersion. Meso corporations are headquartered, and based in a relatively small number of countries, and these are mainly in the OECD area. There is though, something of a paradox in this. As was shown above, the top meso corporations are also highly internationalized, and spread their activities widely across the globe. Indeed, they are all truly global players. And there is an element of historical accident about where certain meso corporations choose to be headquartered.

In the banking world, one notable example of this is HSBC, the Hong Kong and Shanghai Banking Corporation. It was founded in Hong Kong, and for most of its existence has been closely connected with the Chinese market, following the track of British Imperialism in the Far East.

Following the victory of the Communists in mainland China, HSBC retreated to Hong Kong, and then expanded into the UK by taking over the Midland Bank, a commercial and retail clearing bank. This shifted the centre of gravity of the bank’s operations to Europe and the UK, although the name became suitably anonymised through the use of the HSBC acronym. Uncertainties around the status of Hong Kong encouraged HSBC to shift its HQ over to the UK, where it currently is. Lacklustre market developments in the UK and the EU have given rise to rumours that, unless properly “incentivised”, HSBC may yet move

its HQ back to Hong Kong. There are other examples where global meso corporations are willing to re-locate to take advantage of tax concessions and other fiscal advantages.

Nevertheless, the location of an HQ is generally considered beneficial for the host country, if for no other reason than the groups global earnings will be taxed in the host country. As both France and the UK have found out, this transfers the fruits of international activity into the coffers of the national treasury.

Chart 10

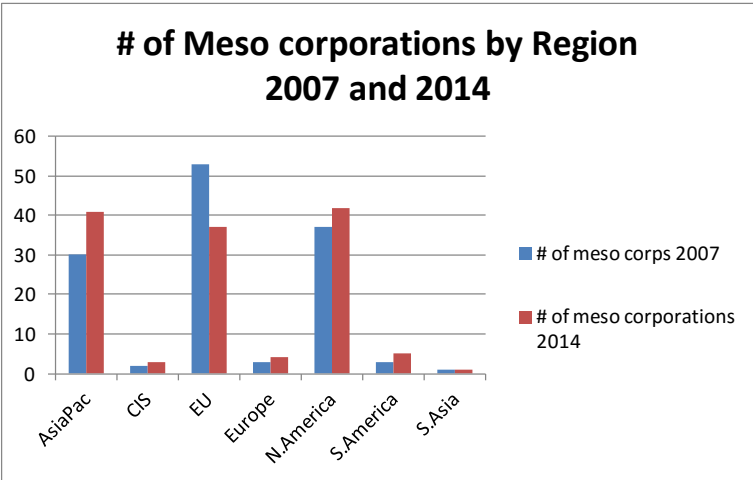
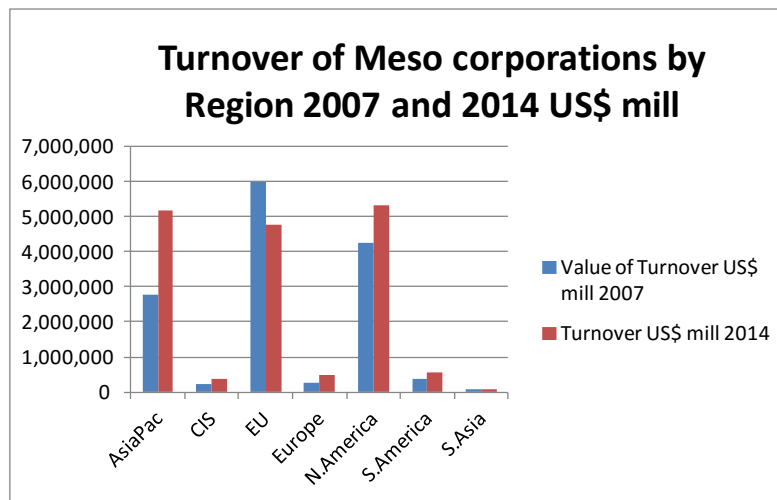


Chart 10 shows the number of corporations by their regional affiliation (the location of their HQ). It shows how this changed between 2007 (pre GFC) and 2014 (post GFC). There are small increases in the number of Top 100 meso corporations in the CIS (former Soviet Union & satellites), Europe (ex the EU), and in South America. The overall number of companies in these areas remains very small. The most striking aspect is the fall in the number of top corporations headquartered in the EU.

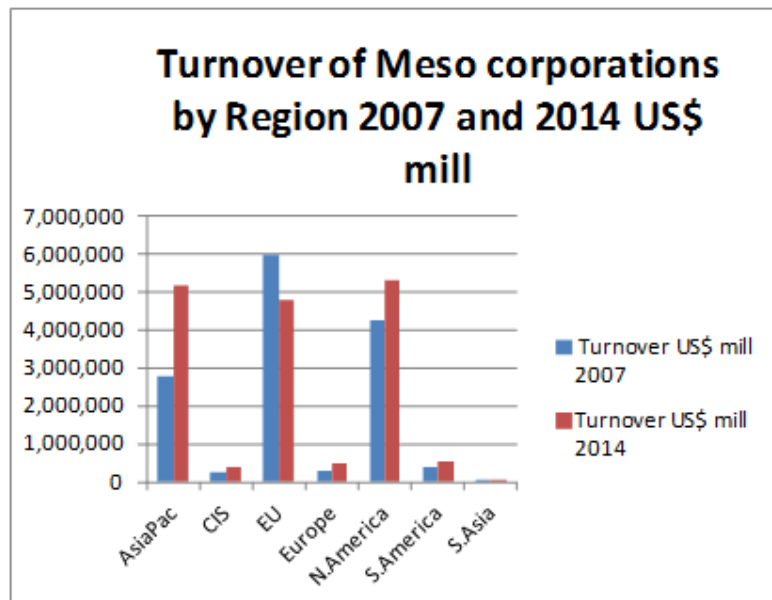
The three largest regions in 2014 are, firstly the USA & Canada, followed by AsiaPac (mainly Japan and China) and then by the EU. In recent years there has been a striking switch in the numbers of Top 100 corporations between AsiaPac (increasing) and the EU (decreasing).

Chart 11



Charts 11 and 12 show meso turnover by region in terms of currency values, and as a share in Top 100 turnover. The amounts, and share of turnover in AsiaPac increased dramatically between 2007 and 2014, making the AsiaPac region the second largest after North America. The EU slipped from first to third place in 2014

Chart 12



This would appear to be a direct consequence of the application of austerity policies within the EU, and the consequential suppression of demand. The charts show that most top level meso activity is concentrated in North America, AsiaPac and in the EU. There is relatively little top level meso activity in other global regions.

Chart 13

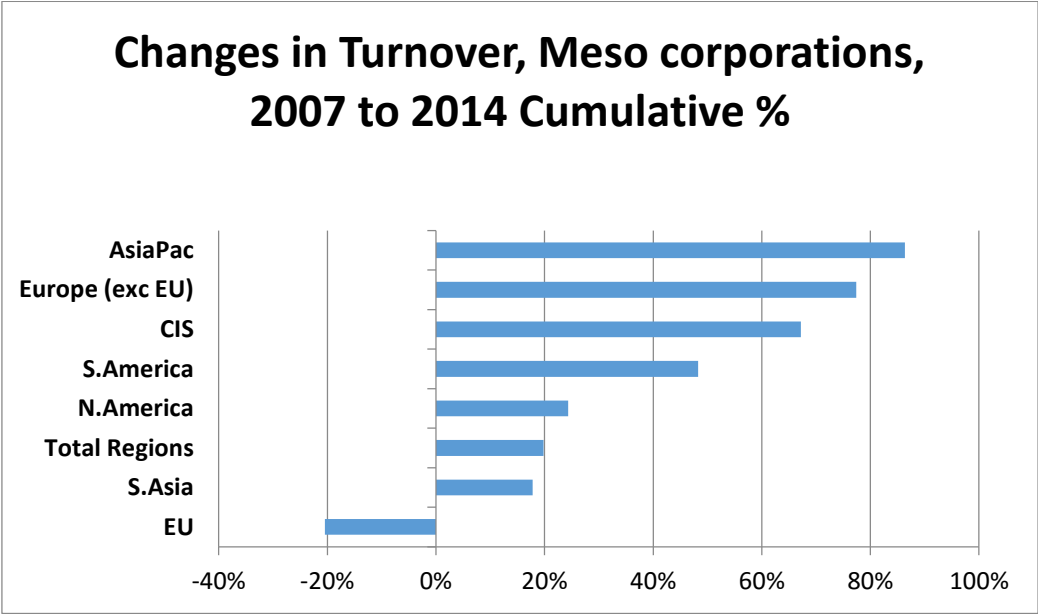


Chart 13 shows the cumulative change in turnover by region between 2007 and 2014. Top Meso turnover increased by over 80% in these 7 years, much faster than the growth rates achieved in North America and by the EU, where output fell by 20%.

Chart 14

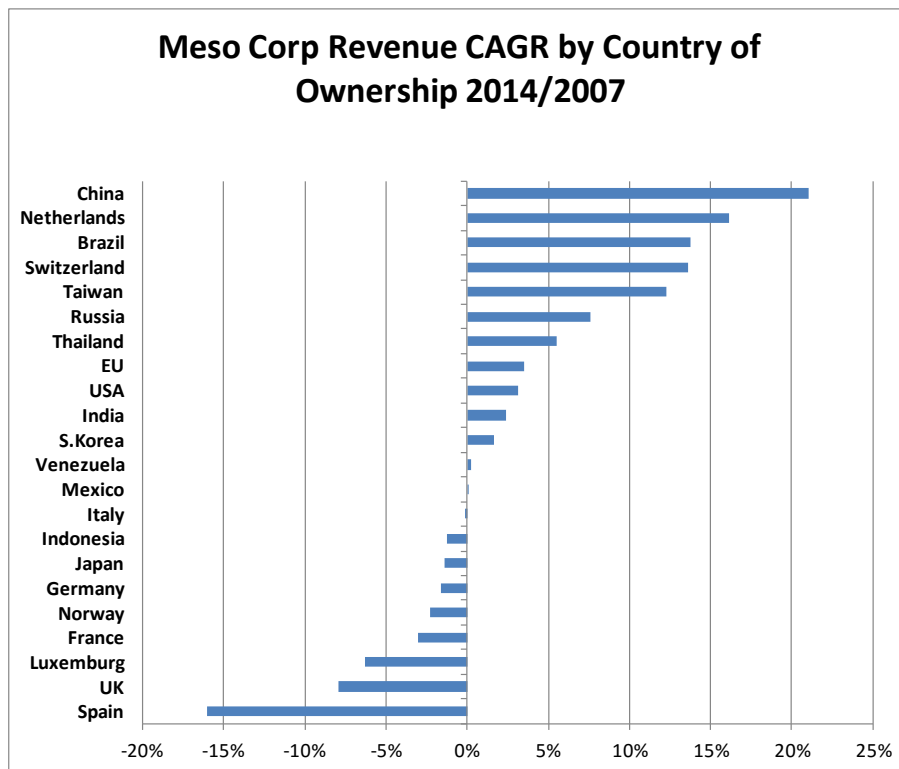


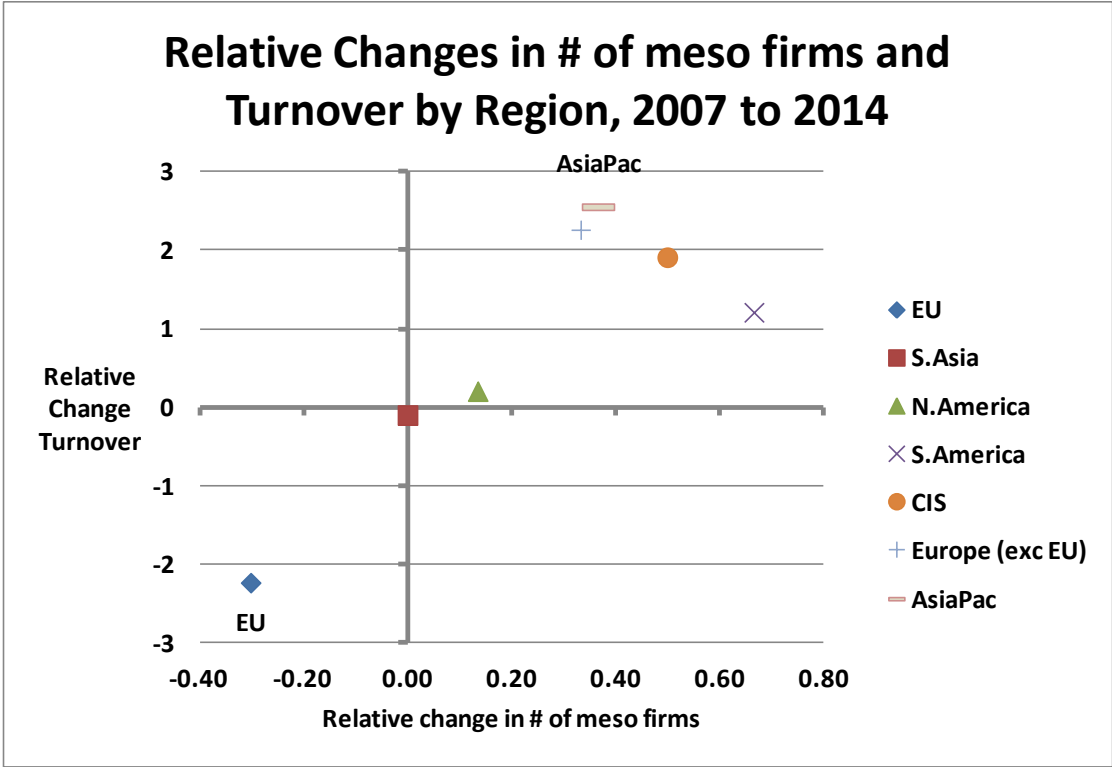
Chart 14 shows how meso corporations grew by individual country between 2007 and 2014. The clear winner is **China**, followed by the **Netherlands and Brazil**. The EU entry refers to Airbus, not to the whole of the EU. There were several countries whose top level meso corporations experienced falls in output, including those located in **Spain, the UK, Luxemburg, France, Germany, Norway Indonesia, Italy and Japan**. Again this highlights the variation in performance across region as well as across product based cluster.

Summary of Geographical Turnover and Meso Corporation Count Changes 2007 to 2014

Chart 15 (below) has four quadrants and is similar to chart 9 above. There are no entries in quadrants 2 (bottom right) and 3 (top left). **Meso corporate activity expanded in the AsiaPac, CIS, South and North American regions**. This is partly due to increased numbers of companies joining the top 100, as well as better performance among existing

members. Some Asian meso corporate behaved very similar to the average (identified here as the 0,0 intersection of the two axes). The region experiencing the worst performance is the EU, where there was both a decline in the number of corporations in the top 100, and the performance of the remaining companies suffered as well.

Chart 15



Conclusions

This paper has shown that the Top meso corporations play a very significant role in the global economy. Depending on the measurement used, the top 100 non financial corporations account for around 12% of global GDP, and around 40% of global manufacturing output. These shares rise further when leading meso financial corporations are included.

The share of this sector rose in the period up to 2007, and may have fallen slightly since then. There are strong concentrations of meso corporations in a small number of

sectors. These include oil and gas, automobiles, banks, retail, utilities, technology and health systems.

Not all of these sectors have prospered in the last few years, and there have been some that have experienced a reduction in the number of firms in the top 100, as well as a fall in their revenues. FMCG, Industrials, telecoms and aerospace/defence are this group suffering from relative decline. The reasons for these developments will be investigated in a separate paper.

It has also been shown that there has been the emergence of a growing number of Chinese corporations in the top 100 group, and many of these are State Owned Enterprises. The overall share of companies based in the AsiaPac region has overtaken the EU to be the second largest contributor to companies in the top 100 list. North America (the USA) continues to contribute the largest number of large meso corporations.

Further investigation is needed to see whether these winning sectors have common features which help to explain the presence of so many large meso corporations. One factor is that large size provides a buffer in times of crisis and recession, allowing meso corporations to expand, and if necessary, move into new product areas through M&A during periods of prosperity.³¹ These figures may also suggest that the rationality of markets view of conglomerates is mistaken. According to this large multi-divisional meso corporations should be shunned by investors on the grounds that their spread of activities leads to inefficiencies, and thus to some kind of under-performance. The theory went on that portfolio investors should make their own decisions about the right balance of

³¹ This may help to explain the paradox of the relative success of low beta stocks (generally meso enterprises). This appeared to weaken the relevance of the Capital Asset Pricing model as a basis for explaining corporate valuations. It also weakened the relevance of various forms of efficient market theories, themselves based around views of rational expectations.

activities across product and country groups for their portfolios, rather than allowing the management of large meso firms to do this for them.

This in turn led to the creation of a “conglomerate discount”, where large multidivisional meso corporations traded at a discount in equity markets compared with more streamlined and focused rivals. The best answer to this has probably been provided by Warren Buffet, and Berkshire Hathaway, a large, multi sector holding company, based around an insurance company core. This sprawling conglomerate company has performed better than many actively managed portfolios, and better than many smaller, more focused, companies. All of which is a curious reversal of earlier views by investors, particularly in the US stock market in the 1950’s and 60s, who were inclined to invest in the “nifty 50”, most of whose members were multi-divisional conglomerate firms!

The information shown here demonstrates that large meso corporations play a substantial role in the global economy. Their behaviour is not adequately explained by mainstream theories of competition, nor can mainstream theories account for what meso corporations do, and where they are located. In our view this can be done better by addressing some of the factors mentioned at the beginning of this paper that identify those areas where meso corporate behaviour and experience clearly differs from smaller, more competitive, companies.

It is also likely that improved understanding of the meso sector will throw more light on why so much contemporary economic theory has performed so poorly in explaining the recent business cycle, and crisis. One of the areas that will be investigated in more detail is to improve our understanding of the relationships between the meso industrial and meso financial worlds. Both the crisis of 1929 and that of 2008 featured a relative over expansion of the financial sector, which then imploded as a result of a liquidity crisis. None of this is adequately described in conventional, neo classical economic theory.

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