

Vade Mecum for Korean Unification

한국 통일의 필수 안내서

올리히 블룸



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Vade Mecum for Korean Unification

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Introduction

Within a very short period of time, communist North Korea could become as politically unstable as East Germany did twenty-two years ago. What does the German experience tell us? Post-transition problems are still visible in the New Lander. Unification appears to become a project that lasts a generation. Once the stone-age communist system in North Korea is abolished, Koreans will be able to learn a lot from what was done properly during the German unification process and to avoid the pitfalls. Thorough and in-depth preparation requires that initial conditions be unveiled in order to pave the way for effective – and hopefully efficient – policies. Not only capital investment but also migration – in both directions – must be considered. The connectivity between micro- and macro-economic implications must be analyzed thoroughly. In addition, sound “unification governance” requires that unification be seen as a rewarding “business investment” making use of, until then, under-utilized human and physical capital in the North. It is important that both partners realize these long-running potentials in order to make the short to medium-term sacrifices economically bearable and politically feasible. Finally, unification must be embedded in an international framework that takes into account security considerations of neighboring countries.

In preparing for unification, it must be clear that knowledge is limited. A political pretence of knowledge like the promise of “*blossoming landscapes*” (Chancellor KOHL in 1990) will surely produce frustration even if much has been achieved. In the Korean case, two questions arise which are at the heart of this *vade mecum*:

- What are the economic side conditions of unification, how can they be embedded into a strategy and, above all: how can unification be financed? In fact, different estimates come to rather the same conclusions in terms of the pure economic costs of unification: one part has to be borne by the public, other parts by private investors. But as the German case shows, this represented only around 15% of the total costs – the majority of the money went towards social and political stabilization.
- Can social and political unification be achieved? An adverse selection process may commence that encourages the most gifted in the North to go south, depriving the North of talent that then has to be imported from the South generating a problem of elitism if not confrontation. In Germany “*Ostalgie*” – i.e. nostalgia for East Germany – is one of the typical consequences of alienation.

Based on a tradition of profound studies on German transition problems (BLUM, SIEGMUND 1993; BLUM 1997; BLUM, DUDLEY 1999, 2000; BLUM, SCHARFE 2002; BLUM 2013a), the idea emerged during a conference marking 20 years of German unification to translate this knowledge into an analysis of the problems being faced on the Korean peninsula. This resulted in an article in one of the major German national newspapers (BLUM 2010) which triggered a visit to Johns Hopkins University in Washington DC, where the director of the Koran Research Institute, Mr. JAE-JUNG SUH, took up the analysis and generated a challenging forum on the issues involved. As a result, the anal-

ysis was expanded academically and detailed underpinnings found their way into a study that was finished in early 2011 (BLUM 2013b).

In preparing for this endeavor, two visits were made to Seoul and discussions took place with North Korean refugees, government decision makers - especially the Central Bank - and scholars from the Korean National Institute for Unification and Korean universities. This provided a fruitful forum for developing the arguments further.

In a parallel political debate it became increasingly clear that a purely academic article would not capture the interest of the general public. Thus, in cooperation with the KONRAD ADENAUER Foundation, the idea emerged of relating problems and theories of the West German experience to specific keywords that could be anchored in common knowledge. The author is indebted to Colin DUERKOP, the director in Seoul of the KONRAD ADENAUER Foundation at that time, and the Korea Peace Foundations who had extended two invitations in 2008 and 2010 to attend conferences on Korean Unification. It was here, that the idea of a “vade mecum” originated.

During my terms as president of the Halle Institute for Economic Research, I initiated two monographs. The first, a data book contains the development of key social and economic indicators of Eastern Germany, mostly in comparison to Western Germany but also in relation to other eastern European post-transition countries (BLUM et al. 2009a). The second monograph offers up deep insights into fiscal aspects of unification and data on the slow path to convergence (BLUM et al. 2009b).¹ A research project mandated by the German Minister of the Interior provided deep insights into the lagging convergence of Eastern Germany with respect to the West (BLUM, LUDWIG 2011). Thanks go to all co-authors of these publications and of the publications mentioned above. I owe special thanks to my old friend Leonard DUDLEY who was an important partner in all of the research on East and Eastern Germany, and to Ms. Gabriele HARDT who compiled many datasets from official statistics.

Most of the text was written by Margit GRÖBKE and reviewed by Christiane HENCKEL, Claudia LUBK and Christin VARCHMIN. Lorri KING did the final proof-reading. I am indebted to all for their many important suggestions for improvement.

Finally, Norbert ESCHBORN, the present director of the Konrad ADENAUER Foundation in Seoul, arranged a perfect agenda for rolling out the vade mecum. He and his support staff organized the publication of the booklet in Korean language. This article provides the original English text.

Halle, December 2013

Ulrich Blum

¹ According to convention we use the term, “East Germany” to denote the former German Democratic Republic and “Eastern Germany” for the New Lander. West Germany is the old Federal Republic before unification (Oct. 3rd, 1991) and Western Germany refers to the eleven Old Lander after unification.

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Ulrich Blum (born in 1953) is a professor of economics. After receiving his PhD (1982) and his “Habilitation” (1986) from the University of Karlsruhe, he became a visiting professor and Lynen Scholar of the Alexander von Humboldt Foundation at the University of Montreal in 1986/87 and in 1987/88. From 1987 to 1991 he was professor of economics at the University of Bamberg. In 1991 he was appointed professor of economics at Dresden University of Technology and became its Founding Dean for the new Faculty of Economics and Management. In 2004 he transferred to Martin Luther University of Halle Wittenberg and was, until 2011, president of the Halle Institute for Economic Research. His academic interests are institutional economics, industrial organization theory, regional economics and transition economics. He has published more than 120 academic articles, many in refereed academic journals, and has chaired national and international committees in the fields of competition, standardization, innovation and technology policies.

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A: Alliances: the Organization of Nations

General Economic Relevance

After the Second World War the world was divided into two ideologically opposing blocks, the so-called free world, with NATO as its most important military alliance, and the Communist Bloc with the Warsaw Pact as its respective counterpart. Both alliances were dominated by two superpowers. The Soviet Union was able to produce considerable economic growth rates in the first decades after World War II and was even able, over the whole period of its existence, to be a first rate competitor of the US in the military field and in space research. However, its overall economic and technological performance was never able to match that of the western world.

The antagonism between these two blocks also cast a shadow on those countries that were divided after the Second World War like Germany, Korea, Vietnam and Yemen. With the melting of the iron curtain, these fields of influence changed and the political and economic costs of separation and potential global advantages of unification became much more visible, both with respect to the present but also to the future. Unification was militaristic in Vietnam and peaceful in Germany. In Yemen it took two short military engagements from either side to complete. In each case there was a switch in alliances or at least in spheres of influence.

Unification means that countries are united within a larger population and that, in the long run, economic performance may increase as extended and more integrated markets can be exploited. In addition, the economic pressure during unification often reduces **rent-seeking** activities, limits the influence of interest groups and encourages institutional reforms. These new dynamics will change regional and possibly even global balances of power. New zones of influence emerge and changes in relative economic weight may be felt, not only in the economy but also in the area of politics and the military. There may be a peace dividend of unification in terms of reduced costs, for instance for security (military and other security forces). Costs may increase for others because of the above-mentioned geostrategic shifts.

Conceptual Framework

The liberal ideal claims that all nations can choose their alliances individually. This enlightened ideal is in contrast with the more Byzantine claim that dominant nations should be able to organize their glacis and backyard according to their own strategic interests. In fact, the BREZHNEV and MONROE doctrines both gave evidence for such approaches. The ability to dissolve an alliance peacefully strongly rests on the capacity of the escaping nations to signal future friendly behavior. This may exert limitations on the future joining of alliances or the building up of military strength. Risk assessment becomes an important strategic issue involving the pre-unification period (maintenance of the status quo), the transition period and future positioning.

Proponents of this liberal system argue that free markets reduce risk of confrontation as they balance interests and lead to allocations that are considered to be fair. What are the ideal sizes of countries or alliances? This depends on the ability to supply public goods, to tax and to control the terri-

tory (BLUM, DUDLEY 1991). Consumption of public goods necessitates that either the citizens travel to the location of production, usually the center of the political organization, or the goods are delivered to their home. Thus, spatial friction costs arise like they do for taxation and control. The limit of the political unit is reached once additional transport costs increase the price of the goods and the costs of taxation and control to a level that individuals are no longer willing to pay. As a rule, states should distinguish between different types of goods, bundle those connected with higher impedance and allocate them to lower regional bodies; those which have little spatial friction should be centralized. This implies that federal states are more efficient than central states as they can exploit different levels of transport costs. Furthermore, their ability to encourage spatial competition in the sense that political units offer their citizens special bundles of public goods that they are willing to pay for, reduces **rent seeking** (TIEBOUT 1956).

Successful alliances form from the bottom up and may develop into federal structures in order to better and more efficiently produce certain public goods, for instance defense or the rules for economic integration.

Relevance for German Unification

German unification was included in the reorganization of all of Central and Eastern Europe that started with the Helsinki Process and its three baskets: political, economic and humanitarian. Because the German question was still unsettled with respect to the recognition of its eastern borders and the status of its lost territories, in particular the eastern territories taken by Poland and the Soviet Union, there was a general interest to accompany and promote German unification after both parts made sincere initial efforts to unite. Stopping this momentum seemed to be impossible. The 2+4 environment, i.e. the involvement of the four allied powers, was therefore an institutional setup that eased unification tremendously. The establishment of five New Lander extended the principle of federalism to Eastern Germany and promoted regional identities. In fact, access by East Germans to West German radio and TV during political separation stabilized regional cross-border and national identities. A long-standing tradition of federalism and regionalism eased political transaction costs of unification and generated a competitive momentum in the catching-up process to reduce the burden on **public finances** and limit **rent-seeking** incentives.

With unification, NATO was not meant to expand beyond former East Germany. However, the eastern reform countries applied for NATO membership pushing the alliance to the border of the Russian glaxis. There is an ongoing debate whether nations should use their alliances freely or whether regional powers should have a say in this.

Potential Relevance for Korean Unification

The Korean “2+4” talks were abandoned in 2008 and have not resumed since. It is important to realize that conditions differ to those in Germany: North Korea is in no way part of the international trade system, its population has limited access to international information and the possession and a launching capacity of the atomic bomb means that its satellite status with respect to China or Russia

is rather limited. In addition, there is no immediate economic benefit for either Russia or China if the troublesome neighbor is tamed. This contrasts heavily to the East German situation where the Soviet Union and, later, Russia, were important economic beneficiaries of unification. Finally, the status of the US in South Korea is that of a necessary, but not ultimately sympathetic ally.

Within the context of present and especially future alliance structures, the aims of a peace process must be discussed (JACKSON 2011; KLINGNER 2011; MOON, RHYU 2011). They may be external or internal. External questions relate, (i), to the role of the North's nuclear capacities – should it be denuked before or after unification, and would this then be in the interest of a United Korea?, (ii), the role of American troops – does Russia or China want to have them at their border? Most likely not, but this is what happened in Europe; (iii), the impact on the Sino-US rivalry and their claims on interest zones in the Chinese Sea; (iv), the dynamics of interest zones: could they be changed by an alignment of South Korea and Japan? Domestic questions relate to the idea of a joint nation and the ability to form a “joint democratic body”. What will the role of the military capacities be and how can a rather neutral South Korean army, well rooted in democracy, merge with a much larger and ideology-based North Korean army?

In general, a local international environment must be set up with an interest in resolving the critical security structure on the Korean Peninsula, similar to the Helsinki process in Europe. This means that, to a much larger extent, Russia, China, the US and Japan have to be brought in and generate a political platform that promotes, through common interests, unification and the necessary underlying trust.

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B: Bureaucracy: Organization and Incentives

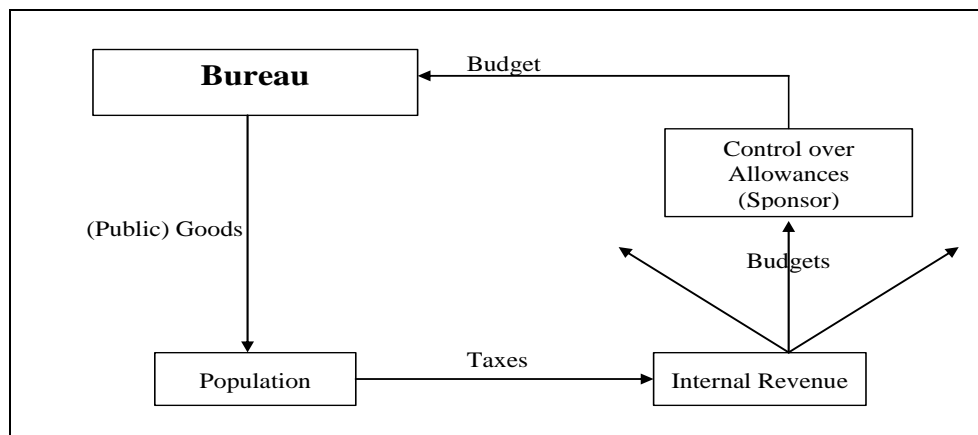
General Economic Relevance

Bureaucracy is a central function of the executive branch of government. Bureaucrats are input-oriented because, in many cases, output efficiency cannot be measured. The related incentive problems generate **rent-seeking** behavior by individuals and interest groups. This limits market-oriented decision systems and the synthesis of **knowledge** on scarcities of production factors and desired goods (BLUM 1997). Within the context of the centrally planned economy and the communist system, bureaucracies extend beyond the social and administrative sector. Their focus is on planning and controlling the entire economy and spying on the population as well.

Conceptual Framework

Bureaucrats do not obtain any personal financial award for their activity according to the ideal set out by Max WEBER (1949). It was Ludwig von MISES (1922) and later William NISKANEN (1994) who added important decisive incentives to explain the behavior of bureaucrats such as the drive of bureaucrats to guarantee the survival of their organization and their propensity to maximize importance through the extension of the direction span (economically and politically). Furthermore, they aim to monopolize or gain control over resources. The figure below shows that government taxes its population in order to generate budgets that are allocated to bureaus. They, in turn, supply public goods to the population.

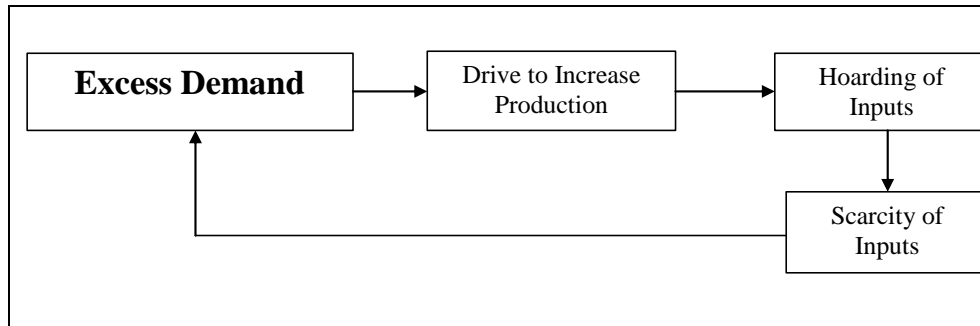
Economic Circuit of the Bureaucracy



The theory of socialist bureaucracies was extended by Janos KORNAI (1980) and Jan KOWALSKI (1983) who showed that socialist firms would hoard resources in order to reduce output risk just like capitalist firms hoard financial means to reduce bankruptcy risk. The figure on the next page shows this vicious cycle. Because of excess demand, socialist firms try to increase production in order to modestly over-fulfill weak plans as a premium-maximizing strategy: modestly in order not to trigger steep rises in plans in the following planning period, weak as the plan must have reserves otherwise over-fulfillment may be impossible. They encounter supply bottlenecks that do not lead to rising prices. Thus, they hoard what may be useful in the future, taking away inputs from other

firms. As financial means are not constrained, hoarding is relatively costless. This increases scarcities and prevents production that covers demand. Excess demand spirals upward with hoarding.

The Incentive Structure of the Socialist Firm



Relevance for German Unification

The creditability of a transformation process greatly depends on the influx of new institutions and **leadership** in the areas of politics and business. This especially relates to property rights issues and the legal system. However, it can also be an obstacle because old bureaucracies display an obsession of wanting to control society. It is often said that unification would have been much easier if there had been a bureaucratic reform in West Germany beforehand. An additional aspect relates to security forces. There is a “peace dividend” that especially affects communist states if their huge military and secret service force is dismantled creating institutional instability.

Potential Relevance for Korean Unification

It is of utmost importance to decide what part of an existing bureaucracy can be “rescued” and incorporated into the market-oriented, liberal world and what parts need to be dismantled. The sheer size of North Korea, its army and its immense secret service bureaucracy will make this an important issue that will need resolving. It may be sensible to organize them into infrastructure construction units for a period of time to reduce pressure on the labor market.

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C: Currency Union: the Path to Convergence or Divergence

General Economic Relevance

Currency unions are usually introduced to bind economies together and subject them to a common economic policy. A currency union may be the icing on the political unification process in which all the other components of proper unification, such as the realignment of the social security systems, welfare systems, institutional settings and economic policies have already taken place. Alternatively, the currency union may reinforce an institutional regime in which countries have to comply and adjust institutions as a result of pressure to compete in order to survive. This implies that, at least after some time, the currency union is accompanied by common institutional rules that apply to social security or economic policy. However, as the case of the European monetary union suggests, non-compliers may persist and drive a currency union to the brink of collapse. Seemingly similar economic and political capacities and traditions are necessary to generate a common institutional understanding.

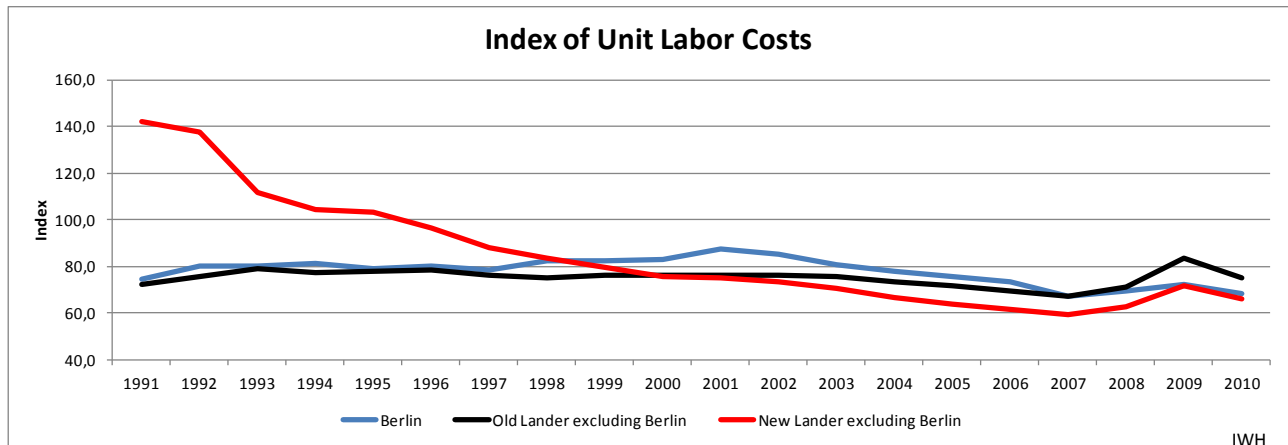
Conceptual Framework

Currency unions rest on the economic theory of optimal currency areas introduced by Robert MUNDELL (1961) and extended by Ronald MCKINNON (2004). The general idea is that an economically optimal currency area is defined by the symmetry of reactions by regional economies to a joint economic shock. In a common currency area, the classic buffers that compensate for diverging economic policies and developments such as adjustments of the foreign exchange rates, interest rate levels or prices for tradable goods are fixed. The only flexibility may be introduced through price adjustments of local goods (an important part of purchasing power), i.e. immobile labor, or rents, and the national fiscal policy if the monetary union extends beyond nation states. Excessive local demand may lead to price bubbles and **Dutch Disease** problems, i.e. the crowding out of tradable products. Convergence may be promoted by comparative advantage in certain sectors (RICARDO 1817; BALASSA 1965, 1979).

Relevance for German Unification

The German currency union was accompanied by a social and an economic union by which most of the institutional systems in West Germany were introduced into East Germany three months before political unification. It was meant to be a strong demonstration to East Germans that unification would be irreversible; this ruled out a more gradual transition process, but profoundly stabilized economic expectations. The exchange rate was politically decided: Cash and most accounts were converted using the DEM as a basis (1:1), which meant the East German Mark – and the economy – were revalued by a factor of 1:3 up to 1:4. Other stocks were revaluated at a ratio of 1:3. This shock erodes the few remainders of competitiveness in tradable industries. The alternative to granting cash was granting property rights which, however, would have necessitated a credible evaluation procedure of private wealth and this seemed politically unacceptable – and risky in terms of **rent seeking**. The result was a considerable increase in **public debt** and stress on **public finances**.

The possibility of maintaining two separate monetary zones and systems was rejected on the grounds of political pressure, especially East Germany's ultimate wish to make unification irreversible, and the threat of substantial migration to the West. "If the Deutschmark does not come to the East, we will go to the West" was a common slogan taken to the streets. Unit labor costs thus skyrocketed in the New Lander, a construction bubble developed, and it took enormous investments and wage restraints to become competitive (BLUM 2009; BLUM, LUDWIG 2011).



Source: WORKING GROUP ON NATIONAL ACCOUNTING BY THE GERMAN STATES; Berlin is shown separately because it consists of a western and an eastern part.

Potential Relevance for Korean Unification

The question of maintaining two separate currency zones and some sort of a currency board may be challenging in the Korean case because of the different size structure (North Koreans make up around 40% of the total Korean population; East Germany's population was just one quarter of the total German population). However, the challenge of stabilizing the population in the North may necessitate giving them "real money". As a consequence, the first endowment will dramatically boost money volume and may generate huge inflationary pressure. Dutch Disease type problems are very likely to crop up if money is spent unwisely and exceeds local production capacities. Moreover, it may also generate inflationary pressures. Most Eastern European countries resolved the problem of monetary overhang by having a minimum two-figure inflation rate.

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D: Dutch Disease: the Transfer Problem and Limits to Absorption

General Economic Relevance

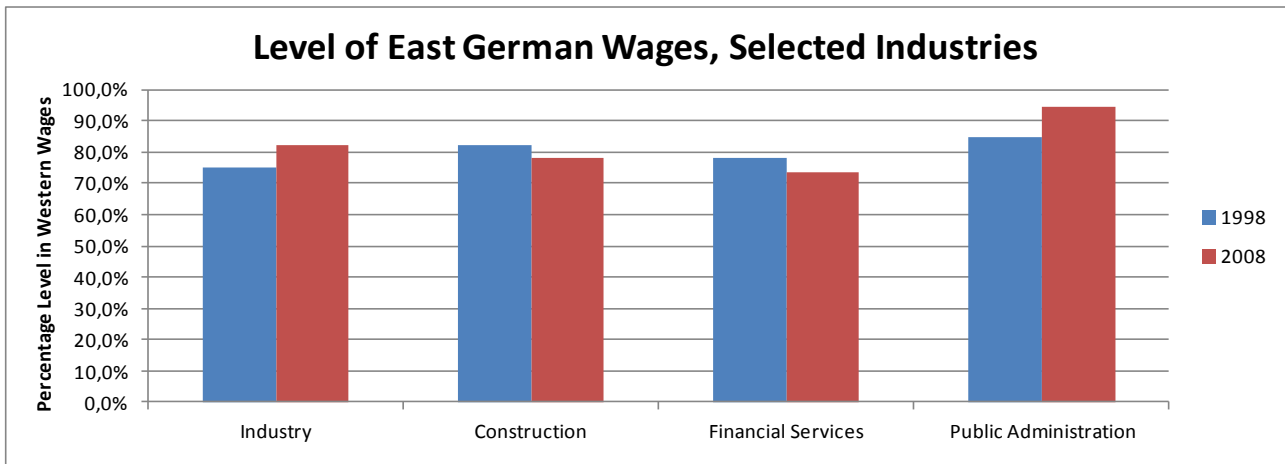
The absorptive capacity of an economy is created by the ability of a region to generate the necessary level of supply for a given level of demand. In a closed economy the identity of demand and supply is guaranteed. In an open economy additional demand for international tradable goods can be satisfied by imports. However, this is not possible for local, non-tradable goods. If the demand for non-tradable goods exceeds the ability to be supplied locally, price levels increase and bubbles may accumulate. This excess demand usually stems from transfers or royalties collected by governments to extract resources. In the case of the Netherlands, public income from the gas fields was generously distributed throughout the economy, mostly for social programs. Local demand increased and this price reaction for local goods, because of falling purchasing powers, led to wage pressure in local industries where supply was limited. As labor is competitive, this exerted pressure on wages in industries producing tradable goods. If productivity increases are unable to counterbalance rising wages, products become uncompetitive and **investments** decline. In an international environment, this would lead to devaluation. However, in **currency unions** or if other economic factors are dominant, this compensation may not occur or be insufficient. In such a case industries have to exit their markets and employment in tradable industries falls.

Conceptual Framework

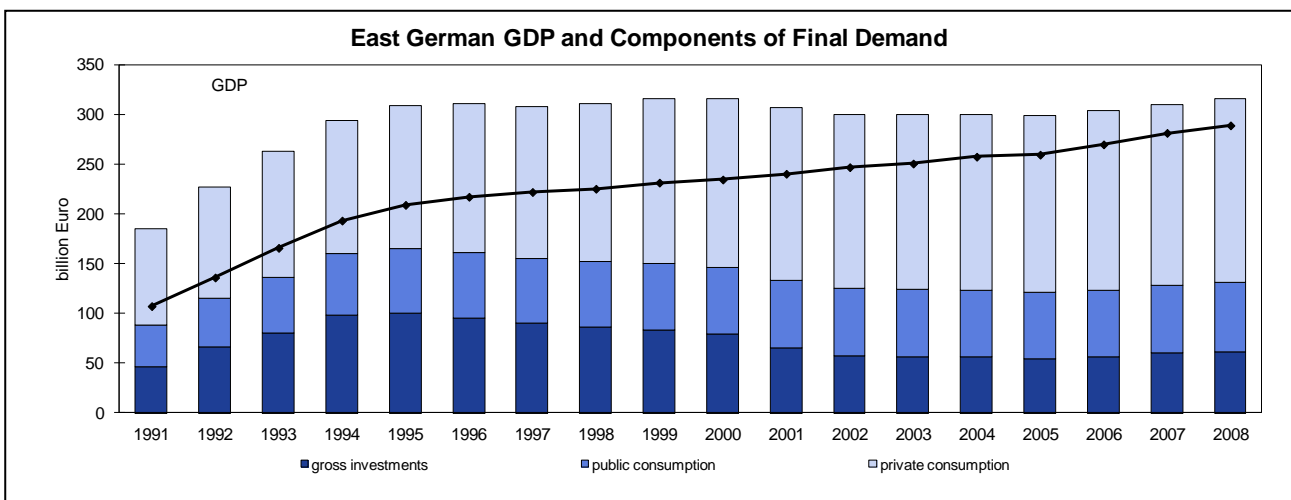
The phenomenon of an economy's limited absorption capacity was intensively discussed within the context of developing countries that were not able to make proper use of outside development aid. In addition, it is often argued that the discovery of profitable national resources in a country may ruin it instead of boost its economic development. Uwe GREINER, Heinrich MAAS and Friedrich SELL (1994), Ulrich BLUM and Simone SCHARFE (2002) and Ulrich BLUM (2009) have applied this concept to Eastern Germany to explain its de-industrialization also in terms of being an endogenous process.

Relevance for German Unification

Because of the large-scale transfers that poured into East Germany, the production potential was only 50% to 60% of total demand. This created bubbles, especially in the construction industry, generating excess capacity surpluses in the building industry with the bubble extending into private housing and commercial space capacities. It led to the absurd situation that revenue in local industries, especially the retail and construction industries, by far exceeded the revenue in manufacturing industries, such as machine production and the automotive industry etc., which bear the risk of global demand. It took nearly ten years for this incentive-incompatible situation to disappear, as the first figure on the next page shows. This adverse effect has vanished because of a steady closing of the output gap. Presently demand exceeds supply by some 10% which is considered to be normal for a region that still needs large-scale investment, as the second figure on the next page shows.



Source: BLUM, SCHARFE (2002) and STATISTICAL OFFICE OF THE FEDERAL REPUBLIC OF GERMANY



Source: BLUM et al., 2009

Potential Relevance for Korean Unification

If North Korea has to be stabilized – be it within the context of its own economic and currency zone or within an economically united Korea - large transfers to the North will become necessary and the risk is high that they will mostly be used for local expenditures. This will stabilize the local economy at the expense of international production and further ruin this more important sector of the economy. One of the most important remedies against the Dutch Disease phenomena is an intelligent use of social funds and a fast renovation of technologies and the tradable goods industries.

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E: Employment: the Dynamics of Industry Structure in Transition

General Economic Relevance

Employment levels in centrally planned economies were high because of the incentive system established by the **bureaucracy**. The ultimate goal in a planned economy is to modestly over-fulfill weak plans. Plans are weak in order to ensure fulfillment. If over-fulfillment is too high, then the plan levels may be increased to a level which is unattainable. Hoarding resources is the most important strategy for not impeding the plan goals. When transitioning into a market economy, the old incentive system wanes and is replaced by profit maximization. As technology improves and sectoral shifts occur, the labor market usually collapses. Female employment comes under pressure if day care infrastructure is reduced. Male employment falls as most centrally planned economies are over-industrialized.

Conceptual Framework

The neoclassic paradigm argues that remuneration follows marginal productivity and income is totally distributed among production factors. Modern employment and wage theory includes information asymmetries, search aspects and dynamic efficiency. But the fact remains that factors must earn their income at market prices. Many production factors today have international price levels such as interest on capital for certain risk categories, or internationally mobile resources and intermediate or environmental goods such as carbon dioxide. The adaptation pressure, resulting from differences in location qualities, therefore has to be borne by immobile labor or real estate.

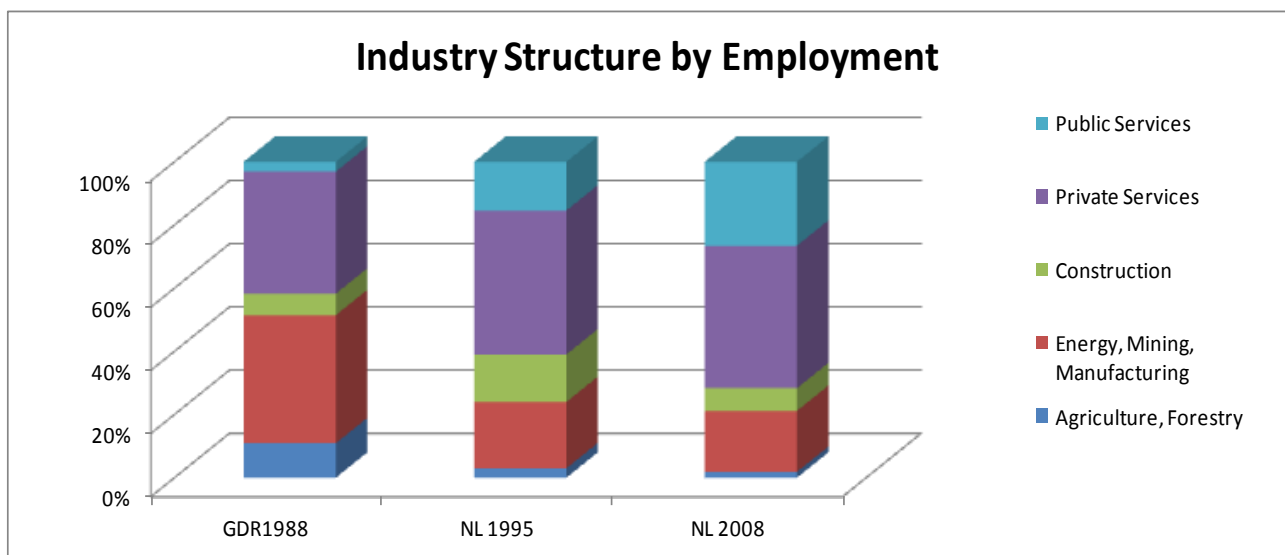
Relevance for German Unification

East Germany was highly over-industrialized. With unification, industrial employment sank to a mere 25% of its former level and this low level had to be supported by huge subsidies (BLUM 2007a). The efficiency gain was on the order of a magnitude of 1:5 to 1:10. Today, industrial employment has reached a level of around 20%, comparable to Western Germany, but without **headquarters**, as investment strategies only boosted industrial employment in plants but not enterprises by promoting export-driven industries. In fact, empirical evidence shows that the more international the firms become, the more their productivity increases. It rises even further once the firm engages in cooperation in foreign countries or sets up subsidiaries there (HELPMAN et al. 2004)

Even more important for the development of employment was the openness of the labor market that allowed East Germans to migrate to the West and look for employment there. About 4.3 million Germans migrated from the East to the West and about 2.5 million migrated in the opposite direction, often as experts in government, public administration and the “capitalistic virtues” of enterprises. The balance of some 1.8 million people was responsible for an enormous economic boost in Western Germany after the turn of the millennium. Of course, these migrations changed the demographic structure of the former two parts of Germany: While the East was formerly rich in young people, it was this group in particular that migrated to the West, whereas the East benefited from

experienced, middle aged people to run civil society. The southern German states of Bavaria and Baden-Württemberg have profited most from migration as they were able to expand their industrial base.

As the present economic crisis shows, a strong manufacturing base is one of the best insurances against crisis. This is one of the major differences between the European core and its crisis-torn periphery. For Eastern Germany, however, the present development also shows that the availability of headquarters is necessary in overcoming existing income and GDP gaps. This necessitates new growth strategies (BLUM 2007b; BLUM, GLEIBNER 2012)



Source: STATISTICAL OFFICES OF THE GERMAN DEMOCRATIC REPUBLIC AND OF THE FEDERAL REPUBLIC OF GERMANY

Potential Relevance for Korean Unification

As the difference in productivity between North and South Korea is much larger than in the German case, the stock of capital after unification may devaluate faster and eventually become obsolete. This implies that the production of tradable goods will come under extreme pressure and unemployment will skyrocket. One interesting way to finance Korean unification would be to use the revenues generated through the exploitation of natural resources. However, as many developing countries demonstrate, such resource strategy may directly lead to **underdevelopment** because of revaluation tendencies.

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F: Freedom: the Driver of Economic Performance

General Economic Relevance

Historical evidence suggests that economic freedom was responsible for the impressive success of western, and later emerging societies, on their way to economic wealth. Furthermore, it seems that economic freedom is compatible with free but partly also authoritarian economic systems, especially within the context of conservative and right-wing regimes. The opposite does not seem to be true, i.e. that a free political system is compatible with a controlled economy. Competition and, thus, the enforcement of antitrust policies to keep markets open is the counterpart to political democracy. A free market system should not allow markets to be monopolized just as a free society should not allow the free voting system to be destroyed. Transition processes from undemocratic and non-competitive structures in Europe first began in the political field and quickly opened markets. The ability to roll out a highly controlled and predetermined economic plan is misleading.

Presently, western societies face a huge challenge when their liberal political and economic model is contrasted with the more authoritarian political systems of Russia, China, and, historically, South Korea and Singapore, which all have opened their markets while keeping the political system under a certain level of control. The question to be posed is whether historically liberal societies erode through **rent seeking** and more government intervention, i.e. to accommodate ageing societies, and whether autocratic systems may generate a competitive edge in markets because of their strong interference capacity to strategically position an economy.

Conceptual Framework

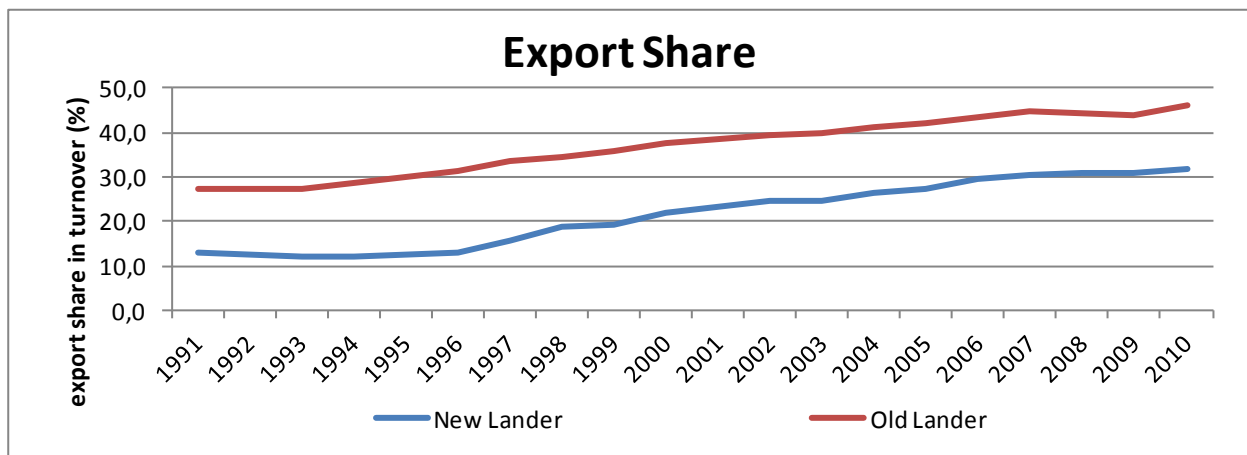
Following Friedrich von HAYEK (1945, 1960, 1968, 1986), Ernst HEUSS (1965) and Erich HOPPMANN (1968), competition is an open social process of trial and error to generate otherwise unobtainable results. As the competition process at the market level is imbedded in an institutional framework, institutional competition (competition among economic “orders”, i.e. institutional architectures) matters. Presently, market systems are in competition with the different political orders such as the liberal order, the authoritarian order and the democratic yet procrustean **rent-seeking** order. Joseph SCHUMPETER (1943) discussed in-depth the issue of whether democracy is just a decision-making method that grants temporary power or a value-oriented endeavor to generate a joint commonality. Ulrich BLUM and Leonard DUDLEY (1999, 2000) show that limits to the information system are responsible for the decline of the communist system.

Relevance for German Unification

Many successes, but also many disappointments, are the result of the very bureaucratic approach to German unification. On the one hand, a reliable political system was implemented in the new states. On the other hand, no room was left for competition on the different levels of the political system. Institutional competition in particular was prevented right from the start in places where government, especially provincial political leaders of the West, had a voice, for instance in the university

and the research system. Here, there was no desire to set up, “with western money”, a more competitive and successful system than in the West or trigger productive experiments. Thus, the potentials of “fiscal federalism” and “competitive federalism” were never exploited.

On the economic level, Treuhand-type privatization prevented **oligopolies** in business – in sharp contrast to other transition countries, especially Russia, the Ukraine or Belorussia. Most of the firms were too small to have sufficient market power to freely choose strategies, or, especially, to penetrate world markets. Compared to Western Germany, this has generated a lower share of exports in GDP and an orientation towards intermediary goods, thus generating – compared to the West – relative economic stagnation and **underdevelopment** in certain economic areas.



Source: WORKING GROUP ON NATIONAL ACCOUNTING BY THE GERMAN STATES

Potential Relevance for Korean Unification

South Korea should inquire into its own system about institutional competition and how it would function under conditions of financial restrictions because of limits to **public finances**. Certain liberalization policies and institutional reforms should be made early enough to accommodate change. This is crucial in order to give Northern provinces, should unification come about, a fair chance to experiment and be better than the South in certain aspects of development. If this is not done, the price of unification rises.

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G: Generation Task: the Role of Migration and “Lebenswelt”

General Economic Relevance

After the Russian revolution and the communist takeover of power in China, many revolutionaries agreed that it would take at least the sacrifice of one generation to organize an order under which communism would work smoothly. It never worked smoothly, and it may take one generation or more to overcome the socially and economically devastating effects of totalitarianism. History suggests that this is true for other types of transitions as well: The devastations of the American Civil War weren't economically repaired until a new **technology trajectory** and light industry offered new opportunities after the First World War.

The present view on the length of transition periods assumes a minimum length of one generation. Even the impressive performance of currently emerging nations like China has to be put into the context that prosperity has only reached about a fourth of the population. In fact, the necessity to recapitalize the whole economy requires an **investment** effort that spans more than one generation because of the availability of the external funds and the limited absorptive capacities. Changes in the composition of human capital are also necessary. Thus, reforms of the education system are needed. In an open society, those who adapt fast to the liberal market environment may find it unrewarding to stay at home. Outmigration generates the tremendous risk that the region to be transformed becomes subcritical in this transition process both in terms of physical and **human capital**.

Conceptual Framework

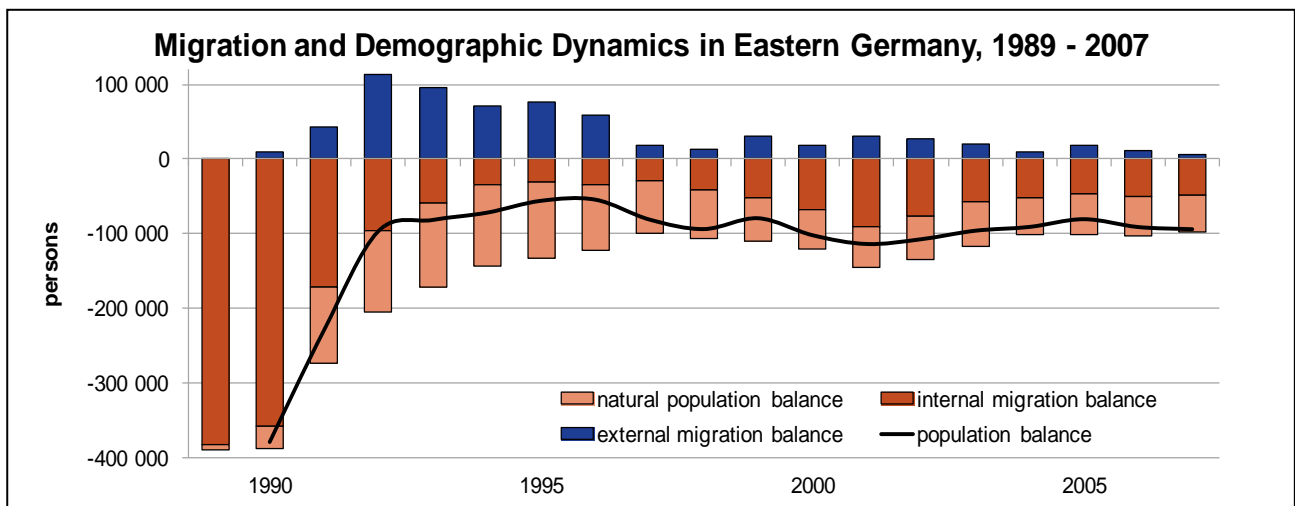
Whereas the theory of **technology trajectories** takes an economic and technological approach and incorporates limits to **absorption**, Jürgen HABERMAS'S concept of Lebenswelt (1985) emphasizes a psychological and sociological point of view. Specific mentalities that were imbedded in a certain institutional framework, and have for a long time been successful, suddenly lose their relevance; new routines have to be learned. This, however, may take a long time. Furthermore, migration theory suggests that push and pull factors are important in accelerating the mixing of populations from non-transition and post-transition areas. The government can have an impact on all of these factors, especially in preventing the type of adverse selection where more creative individuals move to the prosperous regions. This may accelerate decline in the lagging regions and reduce **investments** because of the lack of **human capital**.

Both aspects point to the importance of irreversibilities, i.e. the high sunk costs of transition, especially mental costs. As a result, choices are limited in the fields of politics, economics and behavior. Any system's transition reveals these sunk costs and enforces the sinking of new costs. This is the economic price for a system's change. Creativity and innovation potential are age-dependent since fluid and crystalline individual intelligences. As Lutz SCHNEIDER (2011) shows, the first is more associated with younger ages and relates to spontaneous creativity whereas the latter is connected with deep-founded experience. Thus, the age structure dictates a firm's innovative performance.

Relevance for German Unification

A considerable portion of the East German population thinks that the price being paid for unification is very high in terms of social costs. This mood is contrasted with the initial promise made shortly after unification of soon-to-be-realized “blossoming landscapes”. This does not imply that there is nostalgia for totalitarianism; it only shows that a certain alienation towards the new system can be avoided if it is sufficiently explained. Thus, the concept of “conquest” or “winner in a competition of systems” may be academically correct, but is surely politically destructive.

Migration had a strong impact on Eastern Germany, which had an initial population of some 16 million people. About 4.3 million left and 2.5 million immigrated from the West. This makes a net loss in population of 1.8 million people. This is not only relevant for economic development but also for the creation of civil society: In most cases, the talented and more flexible are the first to leave.



Source: BLUM et al., 2009

Potential Relevance for Korean Unification

South Korea may have to adjust its “one-shot education system” as it may be a primary obstacle to the integration of North Korean talent. In the case of de facto segregation, economic and – more importantly – social aspects of unification will be prolonged. The pathway towards an integrative view must already be cleared today. If industry in the North is to be given a long-term chance, migrants that come from the North must be trained in the South in order to ensure skilled personnel for future growth because they might return in the future.

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H: Human Capital: Qualification, Innovation, Entrepreneurship

General Economic Relevance

Historic evidence underpins the strategic role of education and institutions that favor creativity, innovation and entrepreneurship – all essential things for the rise of nations. They explain Europe's as well as Asia's development and the failure of many nations who were not able to establish the necessary institutions – physical or virtual. Most Central and Eastern European countries had a long-standing science tradition that was exploited along the path to industrialization and enforced, in particular, by Joseph STALIN. This has changed the structure of human capital tremendously since the 1920s.

The content of personalized human capital is recognized by formal qualifications. Nations have different traditions in their educational system depending on their historical development. Communist systems put an emphasis on primary and secondary sector activities following the MARXist view that most services do not generate added value and can thus be ignored. This also explains the less developed service sector and its expansion in terms of employment and share of added value after transition. Acceptance and transfer of formal qualifications to the newly accredited standards of the market economy are crucial during unification in order to maintain job opportunities for the inhabitants from the transition areas and to accelerate the social and economic development.

Conceptual Framework

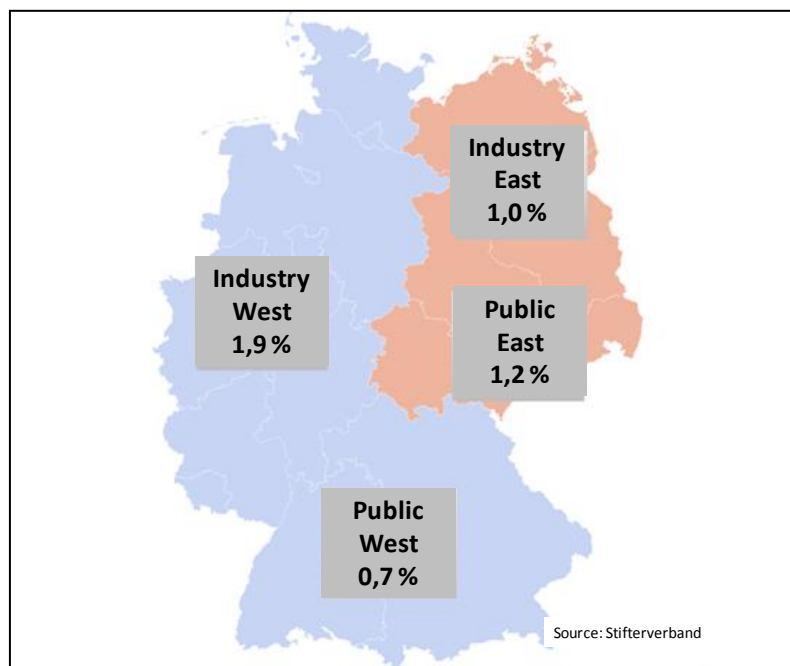
The idea that physical capital and human capital must be efficiently combined stems from Friedrich LIST (1841) who sharply opposed the non human capital view of the traditionalists, especially Adam SMITH (1776). Friedrich LIST argued that the potential for wealth is more important than wealth itself. Over and above other factors, he saw economic expansion rooted in the institutional structure of a nation, especially in its innovation system. The ability to generate and accommodate individual entrepreneurs and to maintain entrepreneurship under conditions of costly technology development was seen as a key factor by Joseph SCHUMPETER (1912, 1943). The arguments were taken up by Paul ROMER (1986, 1990) who established new growth theory based on human capital as the key driver. As the individual cannot capitalize on all of the benefits of his knowledge, he generates positive spillovers – externalities – that the region or the public can make productive use of.

Knowledge is considered to be the ultimate resource (SIMON 1981) for economic development. It can be implicit and explicit – in the latter case it is open for codification and, thus, formal education, training and, last but not least, examinations. From an economic perspective, the type of examination, i.e. a transcript from an apprenticeship, a diploma from a high school or a degree from university, is a signal. It facilitates the choice of personnel on the labor market. Signals are effective if the better risk is able to signalize at lower costs than the worse risk in order to avoid problems of adverse selection and moral hazard (BLUM et al. 2005).

Relevance for German Unification

Levels of human capital in East Germany by far exceeded the quality of physical capital. One reason was that low wages did not make labor saving **investments** attractive and retarded the **absorption** of new technologies in the economy over and above the shortage of investment funds. However, the tradition of research, development and innovation dating from the 19th century and intensively exploited before the Second World War was not dead and provided the underpinnings for new **technology paths** which Eastern Germany could partly take after the transition. United Germany's government compensated for the loss of industrial research – after it had partly been destroyed during Treuhand privatization – by setting up an extensive infrastructure of public research institutes. Today these institutions are important drivers of the technological and economic catching-up process of Eastern Germany. Industry and public R&D expenditures are shown in the chart below. It should be noted that Eastern GDP is only 70% of Western GDP. Thus, in absolute terms, the values in the East are half of those in the West.

Research and Development Expenditure as a Percentage of GDP in 2006



Source: STIFTERVERBAND DER DEUTSCHEN WIRTSCHAFT

One of the most visible problems with non-existent preparation for unification turned out to be the rejection of many formal qualifications issued by East Germany. This did not occur so much in the traditional German “dual system” of apprenticeships that East Germany maintained after the war. Most of the problems occurred with academic qualifications and specific industry qualifications. This rejection was partly the result of the ideological content of some qualifications, for instance in economics or management. Sometimes it related to the lower level of technology in the East as opposed to the higher level in the West where certain professions had simply disappeared like in medical laboratories. In some cases it seemed to be an “efficient” way of impeding the careers of easterners to open up job opportunities for westerners. Finally, the lower level of innovation effort in

the East generates lower network externalities for workers than in the western Lander. This explains part of the stubbornly stable productivity lag of the East (UHLIG 2006).

Potential Relevance for Korean Unification

It is of utmost importance to properly identify the R&D structure of North Korea and investigate future development potentials. A proper inventory of the R&D to be used in the case of unification should be taken in order to design the general conditions of a military and nuclear to civil conversion strategy. This implies the identification of what might be deemed “pre-transition clusters”.

On the individual level, the acceptance of the old qualifications and their transfer into new qualifications – and their accreditations – can be settled in advance of unification. It is one of the few areas where good unification preparation can occur without the risk that this effort would decay over time.

In addition, the question must be raised of how to tackle the long-term effects of dictatorship on human capital and the ability to live in a civil society. No other totalitarian system has survived for such an extended period in modern times. Enforced isolation and being cut-off from communication, combined with permanent debilitating fear, may reduce potentials for group interaction and **network** capacities, which is an important source of productivity. Even if central clout is weakened, dehumanizing hunger and exposure to total control reduces the possibilities for a revolt. Thus, the ability of the North to reorganize itself democratically without unification is reduced.

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I: Investment: Infrastructure, Natural Resources and the Stock of Capital

General Economic Relevance

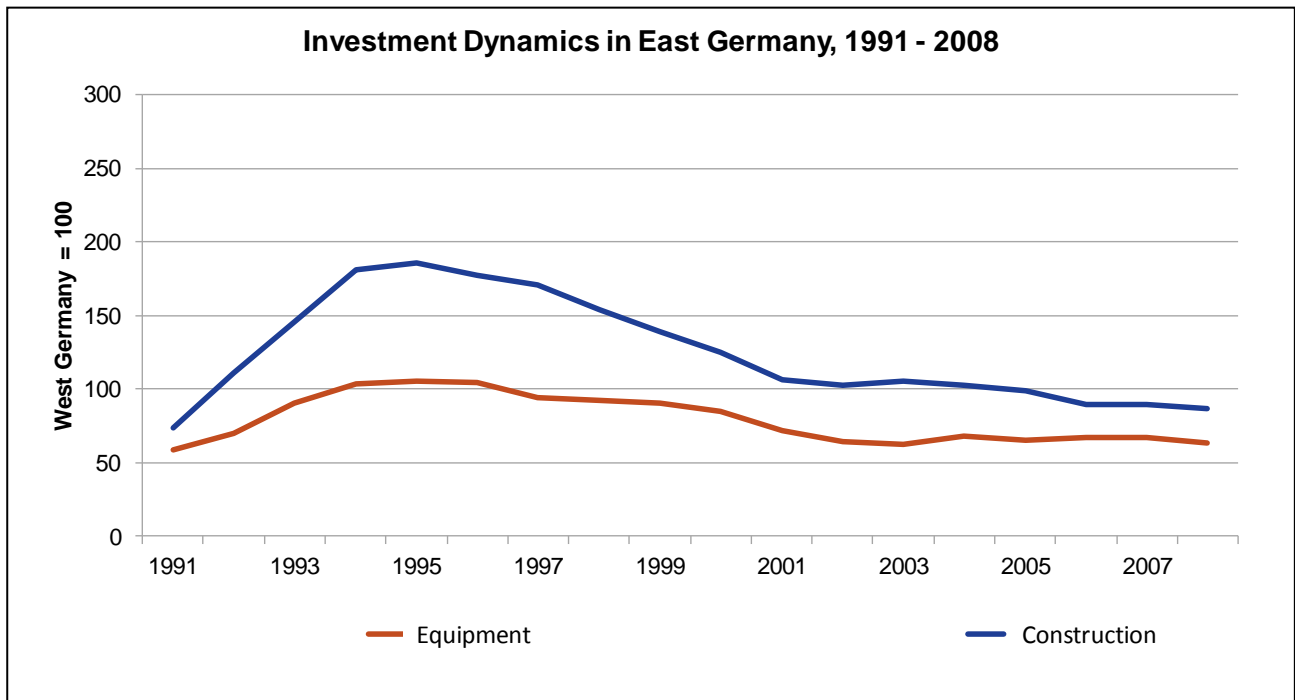
In a modern world, capital is one of the most important production factors. Endowing a nation with capital strongly influences its production potential. The lack of investment made the capital stock of communist countries become obsolete. The economic system's inability to generate a sufficient level of capital accumulation (MARX 1867) is to a large extent responsible for the economic failure of the system. Infrastructure investment plays an important role as a necessary precondition for making productive use of private capital. Investing in infrastructure, be it transport, public buildings or educational facilities, is of tremendous importance for a functioning economy. Private investment is promoted through proper institutional framework conditions and investment incentives.

Conceptual Framework

Capital plays an important role in growth theory; capital and labor are the fundamental factors of neoclassical growth theory (SOLOW 1956). Regional growth models include infrastructure as important and potentially limiting "input potentials" (BLUM 1982). In this context, infrastructure is divided into its main categories: material (transport, public buildings) and immaterial (social capital, institutions, routines). Combining it with **human capital** and institutional factors has been the origin of new growth theory and modern innovation theory (ROMER 1986, 1990; NELSON, WINTER 1982). In fact, Friedrich LIST (1841) always maintained that the combination of human capital and physical capital is an important driver of economic development.

Relevance for German Unification

After the fall of the wall, the East German industry collapsed and huge incentive programs to promote the retooling of public infrastructure produced a buffer against skyrocketing unemployment. Furthermore, by sinking these costs, the federal and state governments made it clear that new states should also have an economic future as manufacturing regions – especially against the counter- vision of a mezzogiorno or a post-modern, purely service-oriented economy. In addition, incentives to invest in firms encouraged the private sector to forcefully engage in a retooling of industry and to utilize state-of-the-art technologies. These incentives were strongly related to the production of tradable goods in order to attract income from outside the region. However, only some 15% of the transfers, which heavily burdened public budgets, were growth-oriented; the majority stabilized public and consumer demand or helped to set up a functioning political and judicial system. Public incentives and favorable investment locations became key factors for private capital investment. This complemented public investment efforts. All in all, total annual investment in the 1990s reached nearly 200 billion euros, i.e. nearly 15,000 euros per inhabitant (BLUM, SCHARFE 2002), something which exceeded Western German levels as the following figure shows.



Source: BLUM et al., 2009

Potential relevance for Korean Unification

As a rule of thumb, total firm capital must be reinvested in the twenty years following unification and about 50% of public capital needs to be replaced. It is suggested to start investing before political unification. Especially in the case of transportation infrastructure investment, the complexities of regulation, typical for liberal societies, can be avoided.

In addition, the potential for resource extraction in the north should be considered. However, caution must be taken not to accelerate the rate of such a policy to where the resource position leads to revaluation tendencies of the currency such as those experienced by the Netherlands or Canada. An endogenous destruction of the industrial base then becomes likely under such a “Dutch Disease” regime.

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J: Justice: Reconciliation and Stability through Truth and Reputation

General Economic Relevance

Justice and truth are the cornerstones needed for a unified country to function as a civil society. It necessitates meticulous inquiries into political crime and implies that ways must be found to deal with and correct legal verdicts that cannot be maintained in a liberal society. However it extends further: For many people, career opportunities were blocked because their political or religious convictions were considered unacceptable by the totalitarian government. Injustice can also be very subjective and, if voiced in public, needs to be put into the context of a legal and civil society in order to not create a distorted view that often favors the well-organized wrongdoers at the expense of the victims.

Social justice includes compensation for maltreated individuals and plays an important role in the acceptance of the liberal system. It is well known in the western world that the modern state is also founded on the promise of social opportunities. Having lived “on the historically wrong side of the fence” and potentially wasted the opportunities life could have offered, redistributive social justice may be important in the unification process. An important aspect is the acceptance of individual effort under mostly unrewarding conditions. The quality of political leadership may be judged according to its ability to honor biographies that evolved in a difficult environment.

Beyond the historically correct appreciation of the past, truth as an ethical and religious concept plays an important role in economics because of the necessity of having a reputation in markets in order to reduce transaction costs. Agents with good reputations are better able to signal and engage in contracts.

One of the most important transaction costs of unification is its long-term scope – a **generation-long** endeavor. The dismantling of old structures and the reorganization of the economy and social institutions take time. If reputation capital remains low in the transition period, high economic costs may be incurred.

Conceptual Framework

The acceptance of a political system is crucially dependent on its ability to generate consent and, more specifically, positive “renegotiation expectations” (BUCHANAN, TULLOCK 1962; BUCHANAN 1975). In other words, in the absence of a positive constitutional vote by the electorate, consent is given if the majority does not fundamentally challenge the system. A second aspect of loyalty formation is a sufficient influence of voice in order to prevent exit (HIRSCHMAN 1970), i.e. allow people to exert influence on institutional change because otherwise, they may emigrate and be lost for later social and economic development. An important aspect of social justice is founded in neoclassical theory, especially the decreasing marginal utility for rising incomes. John Stuart MILL (1848) thus argued that the same absolute sacrifice affects a rich person less than it does a poor person. This has implications on how collective burdens such as the **costs** of unification are to be shouldered. Finally, distributive justice may be impeded by “leisure class” behavior, i.e. seemingly “con-

spicuous consumption” (VEBLEN 1899) that generates envy. Winners in unification may therefore not be positive models for a public that is still suffering from transition hardships, becoming living examples of the morally rotten new system.

The ability to reconstruct economies devastated by central planning systems is strongly dependent on the credibility of economic policies. Dependable institutions play an important role. Their reliability, for instance in the judicial fields, is important for implementing reforms, which are only credible if their reputation is guaranteed. Free markets, in particular, rely heavily on reputation which guarantees fair exchange and competitive behavior, and this effort is rewarded.

Relevance for German Unification

Even though everyone was economically better off after unification – with rare exceptions of personnel of the system of oppression – the argument has not vanished from the political field that Germans from the East have not been sufficiently honored for their life-time of work. The idea that their effort is not accepted in the West, the feeling that they were conquered, the fear of disorientation and living in a social environment that had been imposed on them are all important dividing factors still in place that stabilize “legends” about how comfortable living in Eastern Germany actually was.

In many cases the true state of the economy and society had been hidden from the East German population because, buffered by West German money, transition was relatively smooth compared to other Eastern European countries. In 1982, the famous STRAUSS loan, negotiated at the request of East German leader Erich HONECKER between the prime minister of Bavaria, Franz-Josef STRAUSS, and Alexander SCHALCK-GOLODKOWSKI from East Germany, was the first sign that East Germany had run out of international cash and was on the brink of financial collapse. Both have documented this event in their memoirs (Joseph STRAUSS 1989; SCHALCK-GOLODKOWSKI 2000). Six years later, the same situation reemerged. The devastating situation in East Germany was properly documented by East Germany’s head of the central Planning Commission, Gerhard SCHÜRER et.al. (1989), but was unfortunately never revealed to the general public. Even worse, only some years before West German economic institutes had stated that East Germany’s economy had a productivity level that was about 80% of that of West Germany. In fact this rate was at about a quarter. The truth matters if hearts and minds are to be won over during the unification process, especially truth about the economic and social situation before unification.

During transition, properly assessing individual career opportunities was extremely difficult. In fact qualification and involvement with the old regime did not offer up any easy answers during the process of establishing justice and setting up proper initial political, social and economic conditions in the new territories. There were highly qualified people inside and outside the system and there were people who argued that their careers had been limited as a result of political opposition. Moreover, defamation was widespread, especially in job applications, which reduced competition and poisoned the difficult process of setting up a civil society. Four types of status formally existed.

	Political involvement	No political involvement
Low qualifications	1	2
High qualifications	3	4

It would have been ideal if the entire workforce could have been placed in either Categories 1 or 4, but this was not the case. Persons in Category 2 usually claimed that their low qualifications were not the result of poor individual capabilities but of discrimination and denied opportunities – which often was true, but not always. Persons in Category 3 were often required to run the country as a technocratic elite and efforts may have been needed to convince them to integrate into the new system.

Potential relevance for Korean Unification

Even though the population may be better off after unification, the distributive side and the individual career potentials of unification should not be forgotten. Both have a fiscal, income-related and a very transcendental side that has to be addressed by politics. The first two are clear, the third relates to long-term legitimacy of change – has the burden-sharing been just? Well-founded inquiries and careful treatment of borderline cases are necessary to implement a transition policy and to create a later undisputed picture of the situation. Career opportunities that are initiated through unification should not be burdened. Reconciliation policies, like those promoted in South Africa, have proven successful.

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K: Knowledge: its Impact on Institutional Architecture

General Economic Relevance

Modern societies are knowledge societies! Knowledge today is considered to be one of the most important production factors. Whereas labor and capital are the “traditional” drivers of economic growth, new growth theory has concentrated on the properties of knowledge for explaining the additional residual growth, i.e. growth not captured by labor or capital input. **Human capital** is the most important basis for knowledge and competency.

Knowledge is needed to properly manage the unification process. One of the most important questions is whether this should be done under a central guidance structure or be more decentralized. Friedrich August von HAYEK (1945) argued with his famous “pretence of knowledge” that central authorities are not in command of all the information needed to properly direct economic policy processes. The market is much more able to synthesize information. In addition, in a free and open society individuals can utilize more information than they possess (HAYEK 1960).

Conceptual Framework

Knowledge is more than just information because it implies filtering, evaluating and structuring the latter. However, if knowledge is not properly used, there is no competence in economic policy. Information carries cost, and the transactions costs of information are important drivers of institutional structure. Organizations may grow if additional control costs are compensated for by rising external benefits, especially economies of scale. As a consequence, three types of organizations arise: The atomistic organization, the vertically integrated firm and the horizontal firm (BLUM, DUDLEY 1999, 2000). The latter also exploits cooperation, network and mix-and-match benefits, i.e. economies of scope. This goes beyond the classical paradigm (WILLIAMSON 1975) and helps to explain the structural metamorphoses of market-oriented economies. Centrally-planned economies did not adjust their institutions to the internationally emerging transaction-cost structures and increasingly built up an organizational misfit that burst with transition.

Modern theory and development in the “real world” suggests that scale becomes more important. Some of the reasons are (i), innovation processes need more planning; (ii), market power is linked to size relative to the market and becomes necessary in order to exploit the rewards of innovation and shake off followers because patent systems are only able to defend market positions to a limited extent; (iii), firms need a certain public perception in the labor market in order to generate employer branding. However, this does not imply that firms should not be decentralized: In a flat world (FRIEDMAN 2004) location advantages are more freely and evenly distributed throughout the world. As a result, firms have more choices and more possibilities to decentralize and exploit scope.

Relevance for German Unification

East Germany’s economy was highly centralized in a time when most of the important stimuli from the world’s economy promoted a decentralization of economic units. From 1972 onwards Erich

HONECKER expropriated most of what was then still private small and medium sized enterprises that were thriving in the export markets, and put them under centralized control. This led to a balance of payment crises in 1982 which was healed by a loan from West Germany. This help, however, was not able to fundamentally change the course of development. The East German government owed up to the adverse economic situation after having chased its leader, Erich HONECKER, out of office (SCHÜRER 1989). It provided a dramatic insider perspective on structural economic decline and the inevitable necessity to reform the entire system.

As the restructuring of the economy began, its new industrial composition, the spatial division of labor and the institutional setup that would be required were not known a-priori. Thus, public investment in the infrastructure played an important role in reorganizing the economic landscape. However, the loss of human capital and production competences, especially as a result of the migration of highly qualified engineers from the East to the growth centers in Southern Germany eroded the knowledge base in many areas and aggravated the conditions under which reconstruction was organized. Privatization split up economic entities and destroyed **network** structures. The Eastern German economy today suffers from too little integration which makes it less productive than its Western German counterpart (UHLIG 2006). Apparently, it is not able to exploit the advantages of scale sufficiently.

Potential relevance for Korean Unification

It is very difficult to determine what the proper structure of the North Korean economy will be after unification. It is the market that has to decide. However, many trends from the world economy suggest that scale and scope are important and that setting up an economy of extended work benches, with no headquarters and relatively small individual firms, has to be avoided. The modern information system generates high competitiveness in markets where products are largely tradable. Thus, outside the local economy, integration into the world economy and the companies' potential to survive have to be taken into consideration.

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L: Leadership: the Governance of Unification and Transition

General Economic Relevance

Leadership is a decisive quality required for taking up and exploiting the political momentum needed for unification. All unification processes have had a strong and convincing leader, from Ho Chi MINH and General JAP in Vietnam to Helmut KOHL in Germany and Ali Abdullah SALIH in Yemen. When the window of opportunity opens, the absence of leadership may mean that the opportunity for unification is lost. From an economic perspective the leader must create the additional conditions and momentum needed to allow him or her to prevent others from torpedoing the unification process; professional doubters will be the first to raise their hands. Thus, conviction, trust (especially with one's allies) and arranging incentives (for the parties involved) are crucial factors. A "realistic vision" is important for setting the political, social and economic agenda for development.

Conceptual Framework

Leadership relates to individual characteristics and the ability to transmit clear orders and signals to followers. Economic agency theory explains the conditions under which a leader is able to direct followers in the desired direction if information asymmetries prevail (TIROLE 1986; BLUM, DUDLEY 1999). The principal-agent model suggests that the state of nature (e.g. the window of opportunity for unification) plays an important role and that efficient outcomes are especially endangered by problems of moral hazards and adverse selection. As a consequence, reliable signals, i.e. for the quality of personnel recruited for carrying out unification tasks, are crucial. Finally, clear and credible political signals are also important.

Successful leadership relies on appropriate governing structures. Economic theory suggests that the rules of the game should be established clearly in advance in order to enable agents to stay within their bounds in a rational way. This corresponds to the tradition of the social market economy of Walter EUCKEN (1952). The *ordo-economic* approach proposes a clear set of rules which particularly encompass antitrust law, laws on the openness of markets and on the free currency. One of the eminent problems of transitioning from a centrally planned economy to a market economy is the voluntaristic intervention by government in so-called "rescue operations", especially once large economic units collapse. This may destroy the competitiveness of already privatized firms and result in a **zombification** of the economic system, i.e. the infection of healthy firms by bankrupt firms that are kept alive through government aid.

Relevance for German Unification

German unification showed that Helmut KOHL's clear will to unite the countries and the trustworthiness he relayed to the Americans and Soviets was of utmost importance. This also led internally to a clear constitutional approach when extending federalism to the New Lander and for the inclusion in the western **alliances**. With the first free elections in East Germany in March 1990, the way

was paved for an interim government that had a legitimate mandate to negotiate unification in the context of the existing alliances and the 2+4 (2 Germanies, 4 allies) system.

In terms of the economic system, leadership was required to set up the social market economy in the tradition of Walter EUCKEN (1952) and Ludwig ERHARD (1957). This tradition is centered on the idea of free markets for which government has to establish the framework conditions in advance. These should be self-enforcing, i.e. provide incentives for fair and competitive behavior. The government should not directly intervene in these markets but establish institutions that correct uncompetitive results such as an antitrust bureau. However, when reorganizing East Germany, this system of encompassing rules and a seldom-intervening government came under more pressure than ever as everything happened so quickly. Ordo-economic rules were challenged during privatization when firms were faced with bankruptcy because no buyer was available and the government was not supposed to run the enterprises.

Leadership was additionally important for privatization because thousands of experienced managers had to be recruited, mostly from the West. In fact, agency-theoretical methods were applied by Treuhand when recruiting company financial officers (CFOs) for thousands of privatized firms. They often offered attractive jobs only if a pre-agreed return ticket to the old job did not exist, thus placing selection risk on the applicant. False signals played an important role for the success of privatization and turnover management, especially as the quality of firms and their personnel was not transparent and as competition structure remained obscure. Often, privatized firms were challenged by heavily subsidized Treuhand firms, creating a **zombie**-type competition structure where the better firm was drowned. Moral hazard challenges had to be overcome, e.g. when managers employed by the company attempted to take part in the privatization process as buyers of company assets.

Potential Relevance for Korean Unification

The biggest risk for unification is that there is no suitable leader on the South Korean side! That is why institutional care must be taken. Successful leadership relies on having the right governing structures in place. Economic theory suggests that the rules of the game should be clearly established in order for agents to rationally stay within their bounds during unification and transition.

It is not entirely clear what role leadership may play on the North Korean side. Many risks can be reduced if an interim government is able to make initial decisions in its own right and take responsibility, e.g. for the future role of the army. However, it is not clear how to depressurize a totalitarian system well in advance.

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M: Monetary Policy: Unification in its Global Context

General Economic Relevance

In most cases unification implies that a politically or economically weaker part of the nation is absorbed by the wealthier and politically more established part. As the richer part must prevent the poorer part from migrating into its social security and welfare system, it has to guarantee a decent living standard through **transfers**. The increased **absorption** of goods in the new territories as a result of additional consumption and investment, redirects trade and reduces exports of the old territories and may also increase overall national imports. Surpluses in the current accounts balances fall and may become deficits; existing deficits rise. Consequently, the capital balance also changes in favor of a stronger import position.

In the short run governments will finance the support of the new territories by increasing **public debt**. The overall rise in demand implies that the Central Bank will raise interest rates to reduce inflationary pressure. This is in line with the necessity to attract foreign capital for **investment** in the new territories, and with the shifts in the current accounts balance. Higher interest rates also imply that the currency becomes more attractive for international investors; rising demand leads to a revaluation. This reduces the export position and international competitiveness. Normally, unification should result in a weaker currency as the per-capita performance has declined, but, because of supportive measures, the currency becomes stronger.

If the unifying country has been a substantial net supplier of savings to other countries, these countries may find it harder to refinance their national **public debt** internationally and have to increase interest rates.

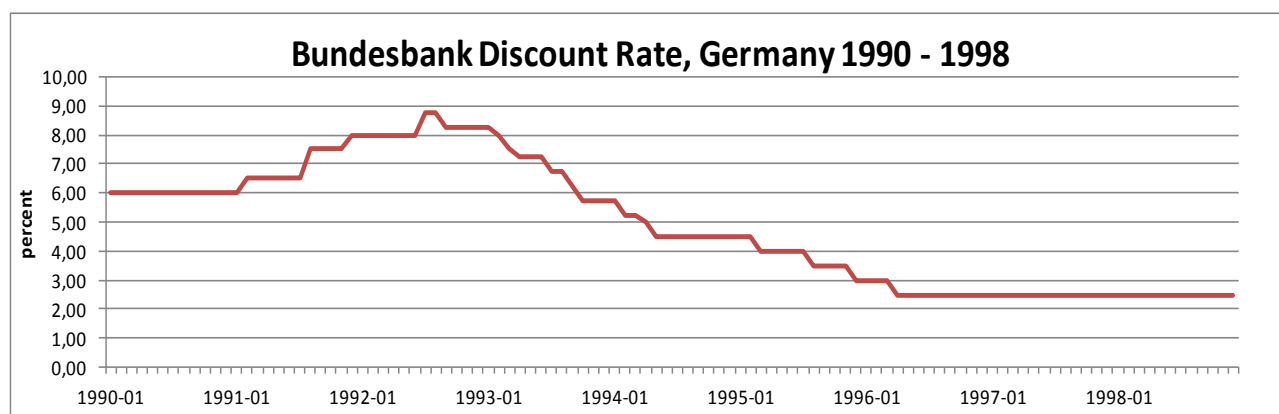
Conceptual Framework

The above reasoning is compatible with general monetary trade theory. Specifically, the argument has been developed by the IMF (KHAN, MONTIEL and HAQUE 1990) within the context of the SALTER-SWAN-MEADE model (MEADE 1951) and was applied to Germany by Uwe GREINER, Heinrich MAAS and Friedrich SELL (1994) and BLUM (2009). These models suggest two things:

- The savings gap of the new territories, potentially even both parts of the country, may exert a strong limitation on investments. It can only be overcome by capital imports from outside, e.g. foreign borrowing and foreign direct investment. This implies that the investment conditions must be very advantageous to attract the necessary amount of funds. It also implies that there will be additional demand for the currency which leads to a revaluation. Furthermore, the central bank may increase interest rates in order to break inflation expectations.
- The revaluation of the currency will reduce the price of tradables at the expense of untradeables. This will put the economy of the new territories under severe strain because its tradables sectors are more or less noncompetitive. Further deindustrialization will be triggered. In addition the export industry in the old territories will also be hit.

Relevance for German Unification

Large **transfers** to the New Lander were necessary to stabilize the country as there was constitutional access by all East Germans to (abstractly undivided) German citizenship and thus to West Germany's welfare system. This implied that standards of living had to be stabilized at around 60% of the West German level – the welfare level – to prevent large-scale migrations. Net annual transfers from 1991 till today totaled around 80 billion Euros and amounted to some 5% of GDP. Germany's 1989 trade surplus became negative and the country became a net importer of capital for several years. Interest rates rose as the Bundesbank wanted to prevent inflation originating from excess demand and thus, the Deutschmark was revalued after some time. Ultimately, Germany entered the European Union at a currency level that was considered to be 20% to 30% too high. In order to regain international competitiveness, adjustment led to low wage increases and a stagnating domestic demand for years in order to reduce local prices, i.e. unit labor **costs**.



Source: GERMAN CENTRAL BANK

Potential relevance for Korean Unification:

Because conditions in North Korea are not identical to those in Germany (it has a relatively larger population and the relatively lower productivity than South Korea) the task of stabilizing and redeveloping North Korea will be much larger than what Germany had to shoulder. Korea will have to attract foreign investment, become a net importer of goods, take on an exploding public debt, and increase interest rates to fight inflation. The Wong will revalue considerably. As a side note: The devastations of the Tohoku earthquake, whose economic consequences were much smaller in relative and absolute terms than any unification, have moved the Japanese economy into the direction discussed.

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N: Networks: General Purpose Technologies and Clusters

General Economic Relevance

Cooperating in networks is part of a new trend in economics. Historically, only spatial closeness was considered important. Today, firms in a modern, more distributed and more “virtual” world have to balance their competitive advantages - especially their core competences - at a given location or in a given industry, with the comparative advantages of producing at other places. Research and development become ever more important with networks forming clusters with publicly funded institutes. Furthermore, the “limits of the firm” are no longer clear and, in particular, can no longer be identified by the financial structure.

Conceptual Framework

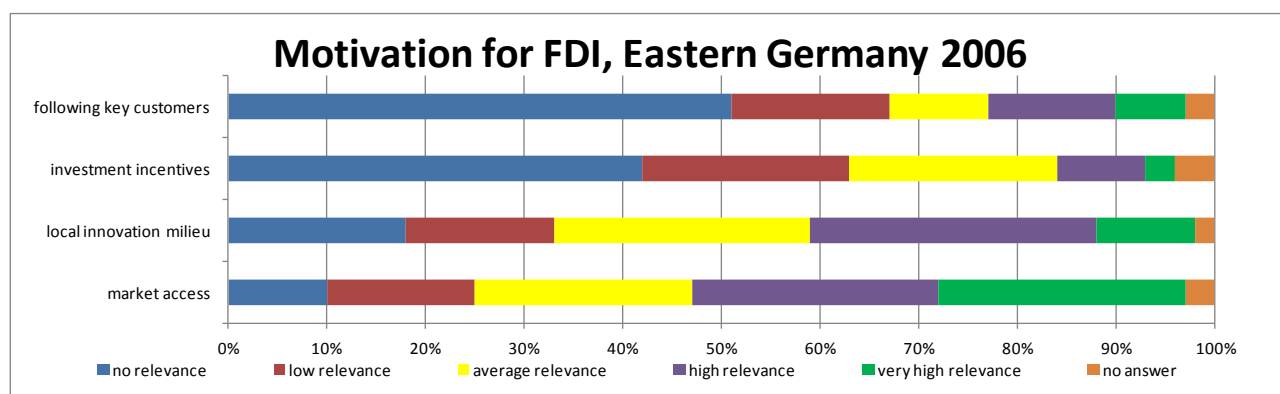
Transaction costs are considered the most important factor delimiting markets from hierarchy (WILLIAMSON 1999). These transaction costs are not only product-oriented or technology-specific but also relate to general institutional factors. Therefore firms have to be much more flexible than they have been historically and networks of interaction emerge in order to solve specific tasks. Spatial clusters exploit agglomeration economies; industry clusters often are bound together by “spaceless” knowledge, especially general purpose technologies (HELPMAN 1998). Vertical clusters are held together by a system’s head which benefits all the delivering firms. Horizontal clusters are based on technological similarities, where a general purpose technology often plays a dominant role (BLUM 2008). Sometimes, new technologies are attached to existing industries in a region in order to rejuvenate them; this may generate “lateral clusters”. François PERROUX (1964) proposed a concept of physical interaction in geographical space in his growth pole theory that is in contrast to the input-output-related, industry-linkage concept of “economic space” promoted by Jacques BOUDEVILLE (1966). The analysis of modern cluster development was strongly influenced by the inclusion of competition and innovation forces (PORTER 1998, 2000) and the revival of trade theory in regional economics (KRUGMAN 1991). In the German context, these network effects differ between East and West – they are lower in the former for a given qualification and explain part of the income gap (UHLIG 2006).

Relevance for German Unification

Privatization destroyed most of the intra-industrial delivery flows that had existed in East Germany. The new clusters that formed were initially vertical and depended on large-scale extended work benches of multinationals (especially the car and the micro-electronics industry). Thus, this advantage of speedy reindustrialization was partly offset by the vulnerability of these clusters to outside decision-making. Horizontal clusters need a lot of time to emerge but then are very stable because their unique competitive advantages rest on a specific set of general purpose technologies such as machine tool engineering, material sciences (glass), chemical or pharmaceutical. In most cases, industrial heritage played a dominant role in the effort to modernize industrial regions. Furthermore, **entrepreneurship** is important because, after privatization and after anonymous **leader-**

ship in steep hierarchies was replaced by a rather decentralized, small and medium-sized firm structure, initiative played an important role in accessing economic growth perspectives.

Foreign direct investments in the manufacturing sectors play an important role as a litmus test for comparative location advantage, because internationally mobile capital is demobilized and sunk when a new firm is founded. The importance of (long-term) innovation milieus and market access against (short-term) customer orientation or investment incentives is made clear in the following figure.



Source: GÜNTHER et al. (2008)

Potential Relevance for Korean Unification

An inventory of North Korean research must be made and updated periodically in order to be prepared for converting most of North Korea's military technology to technology aimed primarily at civilians and for generating stable cluster structures. It is crucial to design a conversion strategy that is credible both nationally and internationally: nationally to keep the workforce in place, internationally because of the security-relevant knowledge of North Korea's military program.

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O: Oligopoly and Oligarchy: Cost and Benefits of Market Power

General Economic Relevance

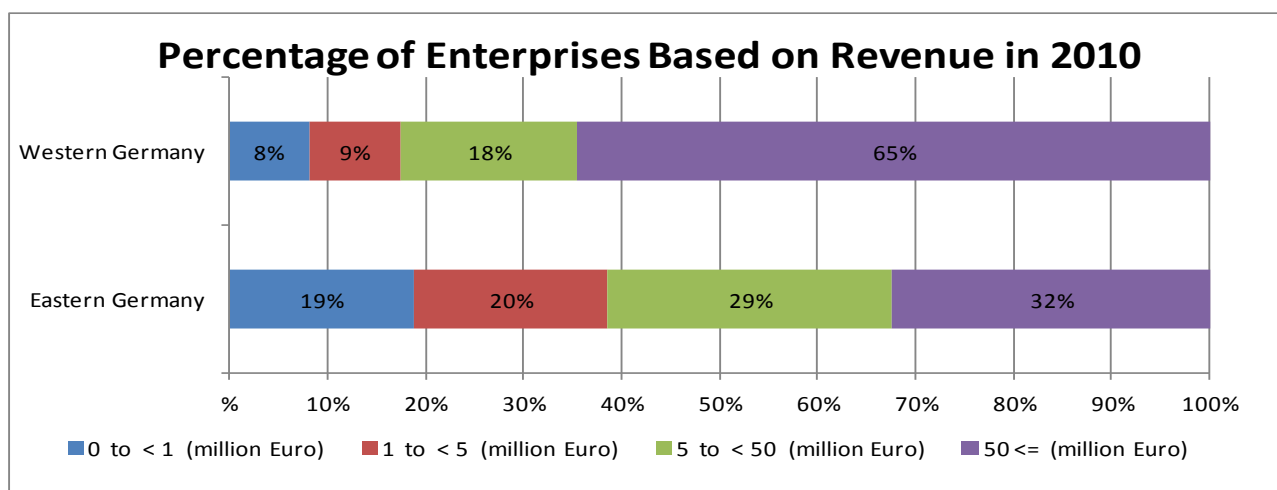
Privatization had led to oligopolistic and oligarchic structures in many post-transition countries. One of the reasons was the imminent fear that dismantling the huge state trusts would destroy inter-industry delivery flows. This cutting of **network** structures might thus have ruined all possibilities for reorganization. Furthermore, in some cases where the public – more precisely the nomenclatures – wanted to retain a stake, downsizing did not seem appropriate. Finally, economies of scale have historically played an important role in state-planned economies. The availability of natural resources often reduced the willingness for an open, international privatization, as the Russian case shows. As a consequence, most of the management and ownership structures, even today, relate to old party loyalties and nomenclatures. However, allowing them to benefit also reduced opposition to transition (KOWALSKI 1990). As a result, medium-sized enterprises are hampered in their development due to their difficulty in accessing the market and accessing the financial means available. The present financial crisis shows how vulnerable oligarchic oligopolies can be.

Conceptual Framework

Innovation theory (SCHUMPETER 1912; NELSON, WINTER 1993) stressed the importance of the birth of industries for rejuvenating economies and putting them on a new growth path. Later, however, SCHUMPETER (1943) stressed the necessity for large-scale innovation systems and doubted whether the individual entrepreneur could survive. Market-oriented transaction costs never forced centrally planned economies to reorganize (BLUM, DUDLEY 1999, 2000). Finally, the incentive system of “modestly over-fulfilling weak plans” by hoarding resources despite the fact that financial constraints like bankruptcy did not exist, encouraged large **bureaucratic** structures (KORNAI 1980). Thus, an economic policy which favors certain firm sizes may be inefficient in terms of transaction-cost theory which stresses that firm organization should reflect economic and technological conditions. Size and international market integration directly relate to productivity (HELPMAN et. al. 2004; HERMANN et al. 2008) which implies that a concentration on a small scale reduces performance.

Relevance for German Unification

The dismantling of about 160 giant combines (Kombinate) and the subsequent privatization of some 15,000 limited companies created an open and free market for all interested parties (BLUM, SIEGMUND 1993). In cases where a combine couldn't be split up, the German Cartel Office made sure there was a careful balancing of power in the market. For instance, oil giant Minol had to relinquish part of its gas stations to competitors before being sold to the French company Elf Aquitaine. Interflug was even driven to bankruptcy because a bid to be taken over by Lufthansa was turned down. Large-scale structures were only maintained in the agricultural sector as they never played a dominant role outside of a regional context. The following figure displays the results.



Source: STATISTICAL OFFICE OF GERMANY

Potential Relevance for Korean Unification

It will be a political and economic challenge to privatize firms and retain structures which maintain inter-industry relationships and interactions and thus create strategic development alternatives to conquer markets more quickly. In a quest to gain market access, a fast dismantling à la Treuhand may be recommended. However, the long-term necessity of generating **headquarters** suggests that firm-size should not fall below a certain threshold in order to be able to regain strength. As research shows, **headquarters** are important as they are responsible for some 30% of a firm's value added and enrich the region (BLUM 2007). Industry taxes are relevant for communities, a high purchasing power is a prerequisite for prosperous retail business, and increased property values stabilize private households and firms. The latter are especially dependent as this directly influences their ability to obtain bank loans.

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P: Public Finances: Financial Stability and Public Debt

General Economic Relevance

Public finances play a major role in the unification process. They come under severe stress as public budgets need to be expanded to new territories in which most of the inhabitants will be unable to make considerable tax contributions for quite some time. Unification implies that a structural deficit emerges that can only be reduced over a long period of time. The way in which the financial equalization between the (rich) old territories and the (poor) new territories is organized is crucial for success.

Conceptual Framework

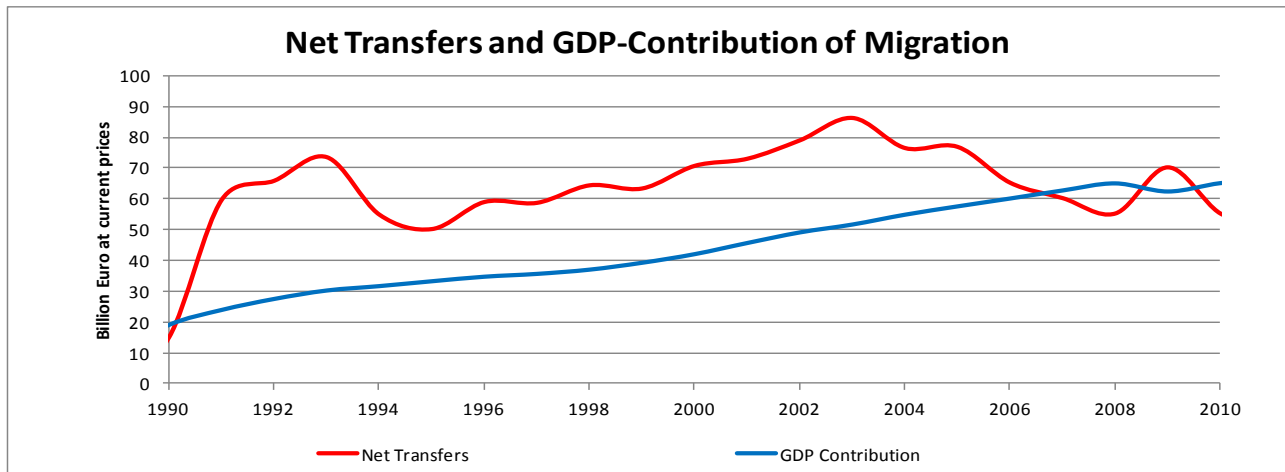
The financing of new territories rests on five pillars:

- Reduction in expenditures: The relative political value of many - up to then undoubted - obligations in affluent areas falls enabling the government to reduce expenditures, especially subsidies. Such a strategy will make the country better off in the long run, but creates a problem with **rent-seeking** groups that have been successful to date. The potential of destroying **rent-seeking** groups under the umbrella of national pathos should not be wasted.
- Increase in taxes: Increasing existing or establishing taxes triggers distributional effects. Given that the new territories are economically weak, trade theory suggests that wages in the affluent old territories come under pressure, especially those for low-skilled workers, whereas jobs which are needed, especially in administration and management, become scarce and may see an increase in remuneration. These redistribution effects imply that parts of the population will find themselves better off whereas some may come under pressure – even in the old territories.
- Public debt: Increases in public debt are likely to be the solution, at least in the short-term, to finance unification. This may reduce the long-term national rating and, if inflationary pressures pile up, induce the central bank to increase interest rates. This could have an adverse **monetary** impact.
- Privatization revenues in the new territories: Taking over property may generate income but it also creates the problem of a large public sector that may be exploited by **rent seeking**.
- Growth through migration: If the new territories provide additional qualified personnel desperately needed in the old territories, an intelligent growth policy may be promoted.

Relevance for German Unification

Unification in Germany triggered the idea of taxing wealth and real estate as was done after the Second World War to finance the integration of some 9 million people expelled from historically German territories. However, the following methods were chosen: (i), a considerable reduction in subsidies; (ii), privatization, which, however turned out to produce huge deficits (some 100 billion euros) because of the necessity to subsidize buyers that had to invest considerably and because the clearing of contaminated sites was extremely expensive; (iii), an additional tax on income which increased the tax burden by between 2% and 3% and which is still in existence. The annual net

transfers to Eastern Germany run at around 80 billion euros a year (BLUM et al., 2009). East-West migration made Eastern property values fall and western property values in the rich agglomerations rise. The net balance of some 1.8 million additional inhabitants in Western Germany is responsible for about one fourth of its economic growth. This is the single most important factor that reduces the costs of unification.



Source: BLUM (2013)

Potential relevance for Korean Unification

It may make sense to organize a public fund fed by an additive tax to finance future unification. However, this may foster the impression that all of the problems can be controlled with these savings. In fact, in most cases, the costs of unification are heavily underestimated. In North Korea, the sheer size of the problem (ratio of population and ratio of income between North and South Korea) will make unification much more costly in relative and in absolute terms than in Germany. The organizational preconditions of a financial redistribution system must be prepared for unification (LEE 1995; KIRCHNER 2007) in order to set priorities (CHOI 2008) and not to be politically overburdened by having to decide on how to distribute when the necessity to distribute emerges.

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Q: Quality: Surviving in Competitive Markets

General Economic Relevance

The deterioration in the quality of good and processes was one of the major problems of socialist economies, especially from the late 1960s onwards. Before this, the reproduction of power plants and plants in heavy-industry sectors were impressive ways of expanding the economy. By multiplying firms of a given technology and correspondingly reducing employment in sectors with low productivity such as agriculture, where confiscations produced large units that were to exploit economies of scale, an impressive growth performance became possible. Overall increases in productivity were thus the result of sectoral shifts and not improved technologies. In the 1960s, this type of economic growth strategy encountered more and more problems because of an underperforming investment goods industry.

Conceptual Framework

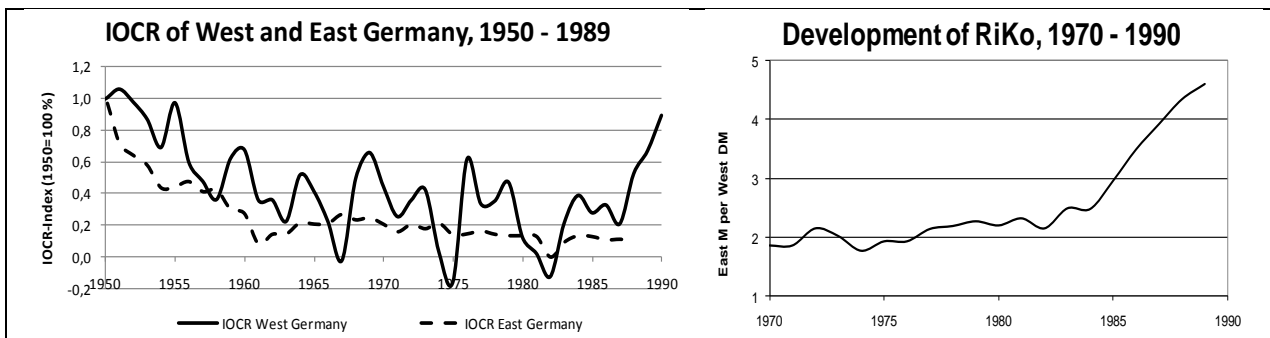
Michael PORTER (1980) distinguishes between three strategies for developing an enterprise's major forces of competition: cost leadership, quality leadership and the search for a market niche. Industries in many developed countries mostly follow the last two strategies. Joseph SCHUMPETER (1912) argues that quality competition strongly dominates pure price competition. In fact, only the neoclassical world restricts market strategies to prices and quantities as products are assumed to be homogeneous, i.e. non-differentiated. Reality shows the success of differentiation strategies of "hidden champions", i.e. global medium-sized enterprises (GMEs) that dominate an uncontested market.

The introduction of quality opens an entirely new field of analysis for modern competition theory. Because of product differentiation, monopolistic competition becomes the dominating analytical framework; consumers can choose between differentiated products. Market power that allows the extraction of rents is explained (GREENHUT et al. 1987). This leads to imperfections that give ground not only to the theory of imperfect competition but also to new trade theory (KRUGMAN 1990). Traditional concepts, such as trade flows following comparative costs, can be extended to include the exchange of differentiated goods of the same category in order to satisfy specific needs. Branding becomes an especially rewarding strategy for positioning goods in the product spectrum.

Relevance for German Unification

Real exchange rates between West Germany and East Germany were difficult to estimate not only because of the differences in accounting systems (System of National Accounts vs. Material Product System) but also because of controls in import and export activity by the socialist states. In the case of Germany, it is interesting to observe how the two twins followed different paths economically and in terms of their structure of goods after the Second World War. Certain products which were nearly identical in the 1950s diverged considerably, for instance cars, consumer electronics, household appliances, etc. Because of its system and its policy of autarky, East Germany entered a vicious cycle of losing ground in quality, not only for final goods but also for investment goods,

which limited its ability to reproduce its stock of capital. The marginal output-capital-ratio shows how much input is necessary to produce one unit of output. If the value of West Germany is taken as a reference, the deterioration of East Germany's performance becomes very visible, especially from the mid 1970s onwards. In the figure below, the values for East and West Germany are given and normalized to 1950 = 100. The coefficient of direction (Richtungskoeffizient, RiKo), which the East German government calculated in order to estimate how many East German marks were needed to earn one West German mark on the world markets (SCHALCK-GOLODKOWSKI, KÖNIG, 1988), exhibits a nearly identical development. Both of these indicators show that East Germany, through the loss of economic performance, especially the quality of its goods, had a per-capita performance of about a quarter of West Germany's. In fact, the erosion of East Germany's **innovation** base, because of the expropriations of the export-intensive medium-sized private firms in 1982, eased central planning. These firms were not only a bourgeois but also a distortive element in terms of coordination. By destroying **entrepreneurship**, what little competitive pressure remained was taken off the socialist firms.



Source: BLUM 2013

Potential relevance for Korean Unification

In the case of Korea, it is very clear that most goods from North Korea cannot be sold on international markets. However, there is huge agricultural production potential which, like its natural resources, for instance metal deposits, can be accessed easily. However, North Korea must take care not to become solely a raw material and food supplier and must try to reorganize its industry if the differences in living standards are to be eliminated in the long run.

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R: Rent-Seeking: Preventing Institutional Decline in Transition

General Economic Relevance

Instead of striving for competition, firms or individuals may capture public power to organize rents, i.e. otherwise unattainable profits. Direct means are the organization of public unrest and strikes to enforce protectionist measures and subsidies familiar in many rustbelt industries that were decaying because of technological change and shifts in the international division of labor. As a consequence, financial support from government slowed or even prevented the market exit of unprofitable firms. In some cases, this generated unfair competition which put healthy firms under pressure and led to economic **zombification**. Many western countries had, and still have, enormous problems in establishing competition regimes that do not sacrifice the unknown firms of the future in support of ailing firms of the present.

A more subtle means of rent seeking is lobbying government and parliament in order to organize favorable regulatory structures (regulatory capture) or contracts. In the context of unification, the sheer size of the problems requiring solutions and the speed in which this has to be carried out limit the possibility of preventing rent-seeking from emerging.

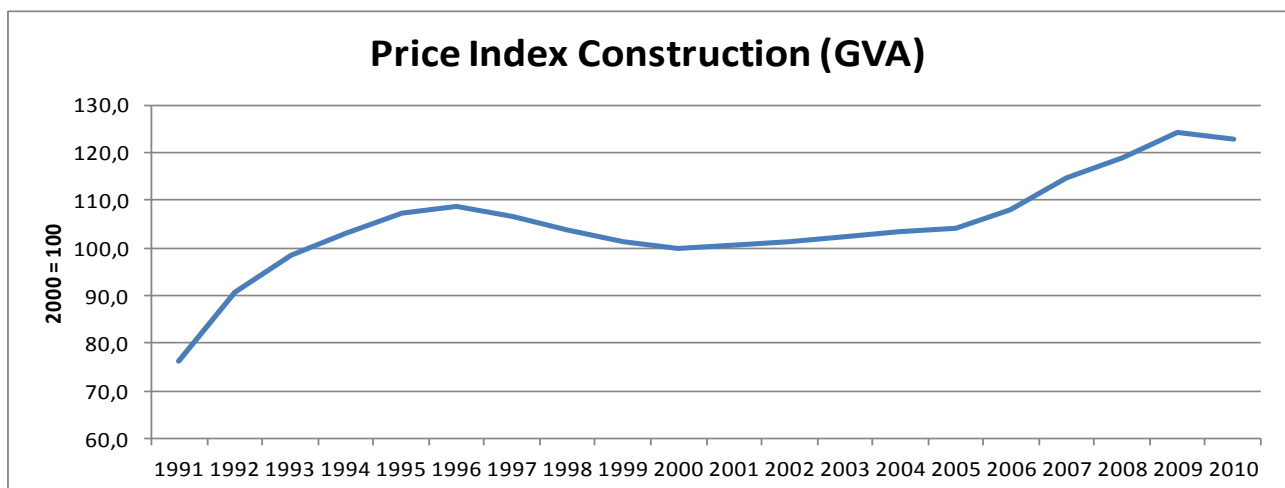
Conceptual Framework

Rents are remuneration for land like interest for capital or wages for labor. The concept of rent as an economically “unjustified” reward was introduced by David RICARDO (1817). He analyzed the effects of the continental blockade by NAPOLEON who wanted to starve England. Corn prices rose and additional land with a lower yield was used to cultivate wheat until the marginal land – in terms of quality – would just pay the corn price. Consequently, all land with better quality would receive an additional, not economically justified profit, a rent. Seemingly, market structure is crucial for the ability to organize rents. Sometimes it is “natural” as in the case of natural monopolies, sometimes it is organized by government. Rent-seeking as a drive to finally destroy the contents of the market economy, was formally analyzed and found to be the reason for the decay of many modern societies (BHAGWATI 1982; HIRSCHMANN 1958; NORTH 1990). Sometimes government institutionalizes rents as an incentive, for instance in innovation processes where patents grant the exclusive use for a given period in order to make investment in research and development profitable. This is called profit seeking. It temporarily reduces the intensity of competition, defined as the speed by which rents erode. The crucial question is how long is this period before profit seeking turns into rent seeking.

Public investment programs are an especially good way of providing easy opportunities for rent seeking if demand exceeds supply. Capturing exclusive market rights, for instance to set up an industrial location, provide medical services or establish telecommunication, creates rents as supply is restricted regionally. This leads to price hikes and potentially even **Dutch Disease** type bubbles.

Relevance for German Unification

In the German case there were different bottlenecks in the unification process that created rents, especially the speed with which unification had to be organized. Among them was the shortage of professionals trained for a market economy, for instance in finance, or people who were competent in the bureaucracy needed for running a modern and liberal state. All these groups received high extra payments in order to work in the New Lander. Banks and insurances took over the East German financial system; some of the loans given to reorganize the enterprise sectors benefitted from interests guaranteed by the Treuhand. Finally, the initial years saw huge public and private investment into infrastructure and construction which led to considerable price increases. This is best shown in the construction business. The graph illustrates the price index with respect to gross value added. It clearly shows the “bubble-effect” during the initial phase of unification and the results of the later decline of the construction business. This only ended once a certain level of normalization had developed 10 years later.



Source: WORKING GROUP ON NATIONAL ACCOUNTING BY THE GERMAN STATES; calculations of the Halle Institute for Economic Research (IWH).

Potential relevance for Korean Unification

Even if a master plan is developed and regularly updated, the speed of unification will overwhelm all decision makers. Given the knowledge problem of centralized decision-making, schedules that are too tight may result in inappropriate policies. It is important to organize institutional safeguards against rent-seeking activities. As identifying opportunities for rent-seeking is a creative task, safeguarding against it, must be even more creative.

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S: Special Economic Zones: a Pre-Transition Infusion of Technology

General Economic Relevance

Special economic zones are means to promote economic development in retarded areas by granting privileges, especially with respect to taxation, but very often also by softening regulations. Special economic zones have a very long tradition. When civilizations in antiquity endeavored to set up new cities outside their region, for instance the Greeks in Sicily, their citizens were granted certain privileges to undertake this colonization challenge. The privileges granted to trading companies such as the East or the West India Companies by the British kings are another variation of this economic instrument. They were also successfully used by China when setting up concentric rings of development around Hong Kong that expanded continuously over time, thus organizing a sort of regionalized economic change and modernization.

Conceptual Framework

If the economic essence of government is to supply public goods, finance them through taxation and create institutions that regulate markets, then competition among nations very often has two government-related aspects: fiscal and regulation strategies. Both can be eased in order to promote outside investment. In a free economic zone, certain exemptions to the normal tax or regulatory rules are granted for a limited period of time in order to set up a location structure that becomes so advantageous that later, when the privileges are phased out, the competitive edge of these locations attracts sufficient additional investors. It is in the interest of the public to encourage globally mobile investors to sink costs that immobilize them at least for the short or medium term. It is in the interest of the investors to not be blackmailed after the investment has occurred like in a hold-up game. Thus, investors will not be interested in sinking more costs than the equivalent of the economic value of the privileges granted. Very often, investment grants approach the level of sunk cost of investments.

Increasingly, organizations such as the WTO or the European Union establish rules for fair economic exchange and look for unfair practices with which governments try to capture attractive investors. This further reduces the governments' strategic instruments for differentiating locations in their strategy to supply attractive development regions to international firms. Thus, flat worlds become even flatter (FRIEDMAN 2004). If these limits are to be bypassed, the establishment of creative milieus may be one of the most attractive possibilities (HÄGERSTRAND 1952, AYDALOT 1986).

Relevance for German Unification

After the fall of the wall, many people thought of making East Germany a special economic zone. However, the constitutional situation was such that any limits to mobility in Germany would have been unlawful. Thus, the question arose of how to stabilize the economy, particularly stabilize economic expectations to convince East Germans to stay and wait for investment and development to improve living conditions. This situation was entirely contrary to what is usually found in other

economic zones where mobility, especially migration may be regulated or even prevented. Thus, the approach which was taken was to include East Germany from the start into the economic system of West Germany and award investment grants to those who invested, especially in those fields where products had international markets.

Potential Relevance for Korean Unification

There are some free economic zones in Korea that are relatively successful and employ medium level technologies that allow South Korean companies to produce goods that would otherwise have to be bought from developing countries because of cost structures. Most of the production lines are of limited technological value since there is a widespread fear that political stability may not prevail and that these high-tech systems would fall into the hand of North Korea.

In the long run, the only hope for stabilizing North Korea is entering its territory with expanding economic zones in order to make unification, once it happens, smoother. Given the ratio of North Koreans to South Koreans (40% to 60%) and its share in productivity and wages (only 5% of the South's), the challenge is so enormous that, before unification happens, the level of wealth has to be increased drastically.

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T: Technological Trajectories: the Long Path to Global Firms and Headquarters

General Economic Relevance

Historic evidence suggests that economic growth, if sustainable and long-term, exploits certain technologies for which a region or a nation has had a long-term comparative advantage, i.e. has an industrial heritage. In the case that such an economic base is destroyed, for instance the cotton and textile base in the southern states of the USA in the course of the Civil War, it normally takes one to two generations to stabilize the economy and put it on the path to sustainable growth. At the beginning of this transition, outsiders will usually take over property, especially economic property, out-migrations of the talented workforce will prevail and wages will be below average until this trend moves in the opposite direction with accelerating growth performance.

In the context of transformation economics, the crucial question is, what sectors of the economy will become the base of a new technology path? Will the necessary human capital be available? To what extent will growth perspectives depend on present and expected wage levels? In the case of low wages, the transformation region has a time-window to experiment on the world market with respect to technologies and products. In this case, trying to push the economy into the world market by under-cutting competitors, especially competing economic regions, may be the strategy of choice. However, choices are limited if high wages are expected. Historically, successful regions then have a look towards their traditional innovation and technology. It is the industrial heritage that had structured regions and human capital for a long time and may now be used as a trustworthy basis.

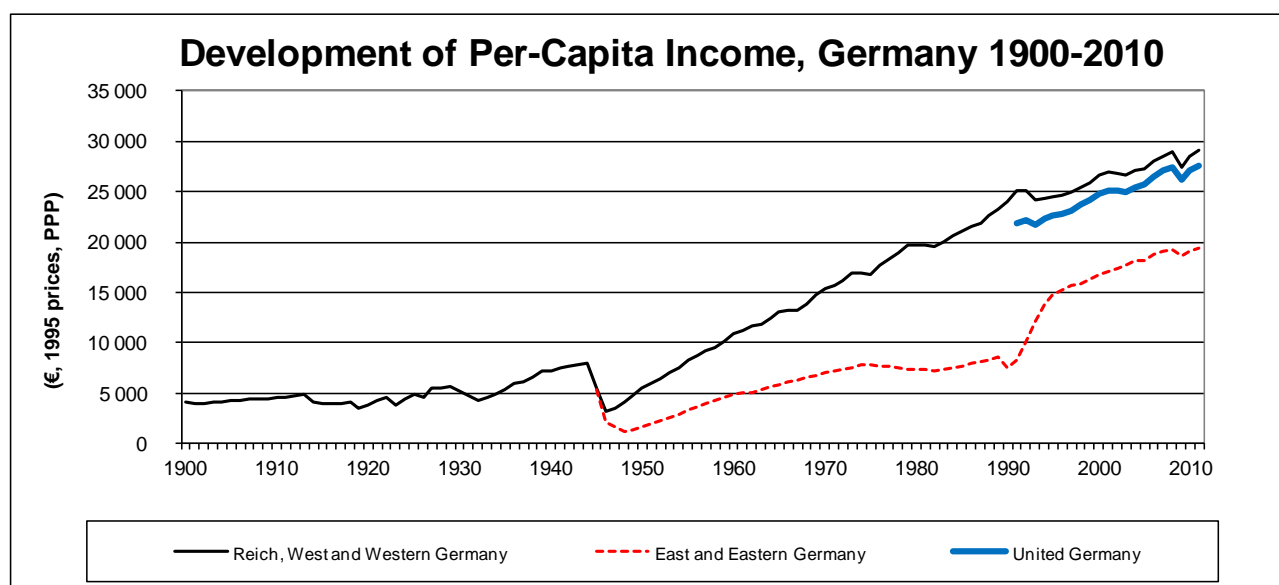
Conceptual Framework

Technology paths relate to KONDRATIEFF cycles (KONDRATIEFF 1926) and Joseph SCHUMPETER's idea of creative destruction (1912), i.e. that basic innovation eliminates old industrial structures and reorganizes the economy for a new long-term growth path. Especially authors like Richard NELSON and Sidney WINTER (1982) have pointed to the importance of trial and error processes and the necessity of having an open society which allows different routines to be experimented with. Specific innovations generate long-term development opportunities, i.e. in the health and life science sector as "sixth KONDRATIEFF" (NEFIODOW 1999). Three types of **network** structures emerge: vertical, horizontal and lateral **clusters**. In the first case, a core industry supports all the supplying sectors. However, if this industry sneezes, the rest of the suppliers catch a cold. Horizontal clusters rely on a given set of technologies which are exploited by different firms with different products so that the competition effort relies on human capital, not on the market. Lateral clusters attach new technologies to relatively heterogeneous industries in the late phases of their production cycle, often rejuvenating them. This may generate an over-critical situation which allows the region to supply high-level education institutions.

Relevance for German Unification

It was very clear that East Germany would become a relatively high wage level region in contrast to the rest of Eastern Europe and the rest of the world. Thus, trying to penetrate international markets with low-wage products seemed futile. Those regions in Eastern Germany that today are economically successful rely on horizontal cluster-type structures based on a **general purpose technology** such as optics, microelectronics, chemistry, pharmacy, communication technologies etc. As successful, emerging small firms with a high technology potential are interesting objects for takeovers by outsiders who have missed the opportunity to step onto the new technology bandwagon in time, limits to the region's ability to exploit the individual technology path and create larger firms and headquarters become visible. As a result, Eastern Germany increasingly becomes a 75% economy in terms of western levels of income and productivity. This is also reflected in research and development and in the group structure, i.e. the size distribution of firms, and **innovation**.

As the figure below shows, Eastern Germany today is on a development path that continues to follow the economic trends of the 1950s and 1960s. The impressive growth rates of the 1990s only compensate for the structural recession into which Erich HONECKER forced East Germany. After taking control of the government of the GDR in 1971, he expropriated the rest of the successful medium sized firms which were especially reputed to be exporting to capitalist markets and which generated foreign cash.

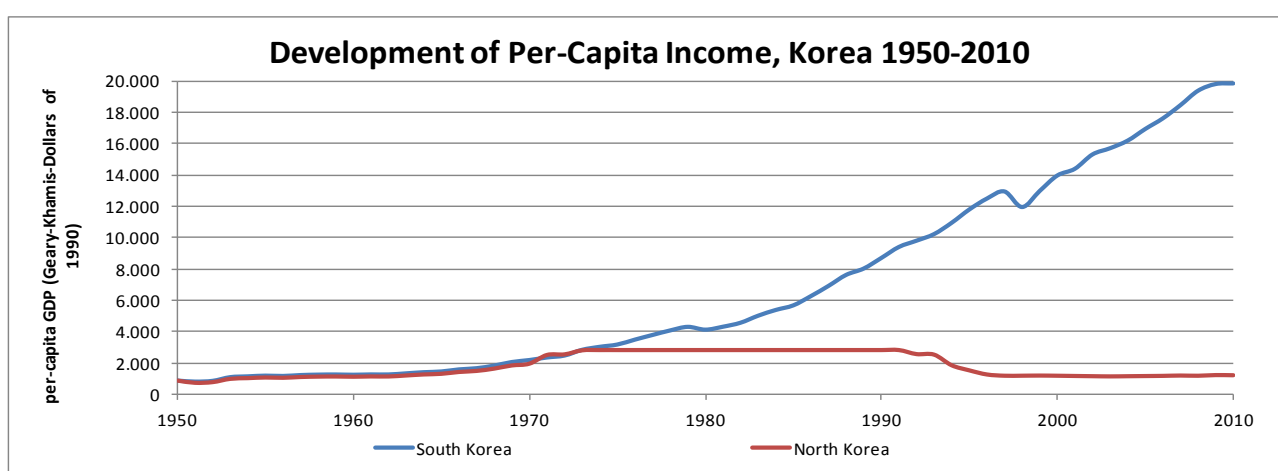


Source: BLUM (2013)

Today, Eastern Germany lacks the economic and demographic agglomeration structure needed to close the gap with Western Germany. Accounting for these differences, a convergence level of 85% seems attainable, but not more than this (BLUM, LUDWIG 2011). Most importantly Berlin, its largest metropolitan area, did not strive for economic success but was satisfied with its new role as the nation's capital. This under-performance remains an economic disadvantage for the whole north-eastern part of Germany.

Potential Relevance for Korean Unification

German experience suggests that migration and technological dynamics are intertwined and that emphasis must be placed on stabilizing agglomeration structures in the North. As a consequence, the crucial question is whether the high or the low wage policy will be followed. If unification means a separate Northern Economic Zone that is built up and prevents workers from migrating en masse to the South, then an experimental phase based on converting existing technologies for civilian applications, especially military and nuclear, has a certain chance of becoming a sustainable innovation basis. However, if a “German situation” of full-scale unification prevails, a more profound analysis of comparative technological advantages of the North is necessary. Again, technologies related to military and nuclear capabilities may be taken into consideration. But strategies to stabilize agglomerations are more important.



Source: BLUM (2012)

Exploitation of natural resources may be an important additional goal for investment initiatives; however, the **monetary policy** side of this strategy, especially with respect to revaluation pressures, must be taken into consideration. In fact, any growth strategy must take into account the limits of absorption of the northern economy. Ignoring this will generate high additional **costs**.

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U: Underdevelopment: Preventing Economic Decline

General Economic Relevance

Within the context of transition theory, it is usually countries with very different levels of economic and social development that unify. In particular, aged centrally planned economies have low productivity levels and, thus, lag behind technologically. They also have low incomes compared to market economies. This is especially true in cases where these totalitarian systems are led by mentally instable leaders. Unification is feasible if the necessary financial funds can be attracted into the formally planned economy, for instance as a result of advantageous location factors or incentive programs. Usually, the first costs are incurred when the country has to be stripped of its military occupation forces or the level of military is reduced because former tensions fall. In the case of Eastern Europe, Germany paid for the removal of Soviet troops. When Mikhail GORBACHEV asked the Czech Prime minister to pay for his troops' return, the latter answered that Czechoslovakia unfortunately had not been divided after the war since the Soviet Union had wanted all of it. Thus, no rich part existed that now could pay for these costs.

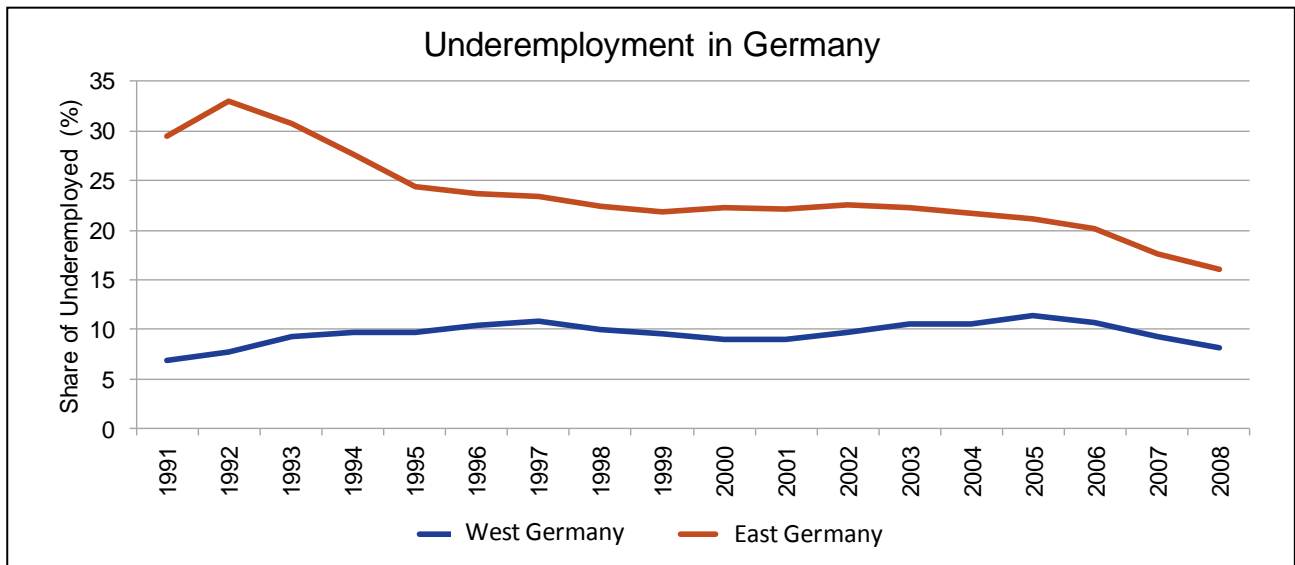
Conceptual Framework

Transition theory very much resembles development theory. However, critical aspects must be addressed that depart from the market economy system including the limited level of absorption capacity, how to protect an "infant industry" and what the necessary institutions are under which such a development can take place. It is important to realize that, following Gunnar MYRDAL (1957, 1968), rules, which especially include mental rules, have to change if development is to be successful and institutions are to be credible. It is further stressed that a **transfer problem**, also known as the **Dutch Disease** problem, may occur because of limits to **absorption**. This gave rise to the development theory that views the opening of markets to foreign competition and investment as being a crucial error and proposes protected development. A less radical approach heavily relies on the ideas of Friedrich LIST (1841): He stressed that institutions matter most for the development of an economy in which physical capital and human capital must be combined in an optimal form. Thus, the educational system becomes critically important. The ability to innovate must be fostered through education at the best places, preferentially outside the country if leading economies offer insights into new technologies. In order to adapt the economy to world-wide competition, tariffs should be created that continuously decrease to "train" and adapt industry to the forces and pressures of competition.

Relevance for German Unification

The first economic development problems occurred in East Germany when the results from the last wave of expropriations became visible in the 70s and the oil crisis fundamentally changed price levels and resource conditions. This put all Eastern economies under severe pressure. As a result, the stock of capital was no longer replaced to a sufficient level and public **infrastructure** became dilapidated. With unification, massive problems of competitiveness became apparent. Although

transfers from the West were rushed in to retool the economy, a high level of underemployment emerged.



Source: BLUM et al. (2009)

The German government decided not to protect the Eastern economy against outside competition with the help of tariffs and/or by creating **special economic zones**. The only supporting policy instruments were incentive programs, mostly through grants or tax relief, to attract private capital. Furthermore, the federal, state and community governments overhauled infrastructure (transport infrastructure, environmental infrastructures, urban infrastructure) in order to make the region attractive. This would entice its inhabitants to stay and attract outsiders. The discussion of creating special economic zones was rejected because of incompatibilities with European legal standards.

Potential Relevance for Korean Unification

It is important to realize that not only internal but also external factors may be very important for the unification process and the development that can be expected. Typically today's markets are more global than 20 years ago or after the War. Thus, the ability to develop an industry within a niche becomes increasingly more difficult.

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V: Victory of the Market System: Can the Costs Be Borne?

General Economic Relevance

With the fall of the wall the antagonism between two blocs with fixed ideologies and opposing militaries ended. This gave way to a new, initially more polycentric, world order. The question is whether this “victory by the market system” had ended the old dialectics of political and economic development in the world. Economically, the world has been “flattened” (FRIEDMAN 2004), i.e. those location factors that are associated with the political system have been leveled.

Conceptual Framework

The end of history was a concept promoted by Francis FUKUYAMA (1992) who argued that the fundamental social controversies in the world, which stemmed from ideological positions, ended with the melting of the iron curtain. Historical dialectics based on the philosophy of Georg Friedrich Wilhelm HEGEL and introduced into political and historical thinking in the context of historical materialism by Karl MARX have ceased. This contrasts with the idea of a clash of cultures proposed by Samuel HUNTINGTON (1996) who believes conflicts are not the result of economic philosophy and ideology but of religious and cultural beliefs. End of history would imply that political and economic level playing fields will dominate international decision-making.

Convincing ideas may be a matter of importance in a period of transition because they are able to align people in a desired direction of development as they reduce transaction costs. This is especially the momentum that ideologies exploit, often at the expense of other ends and values. Ideas and ideologies rely on three factors if **leadership** through communication is to be effective: The idea itself must contain a mission that is credible; this mission must in some way relate to a passion, a story or history of offering and sacrifice that justifies the hardship undergone to achieve the desired ends. Finally, the population must necessarily accept these missions and identify with this passion in order to be successfully recruited and motivated. Going back to historical development, all successful ideologies contained these three elements. In fact, even the successful Social Market Economy introduced by Ludwig ERHARD (1957) in Germany rested on the success of this communication effort: the mission of open markets; the passion of a lost war where the monopolization of industries until the early 1930s paved the way for the usurpation of power by the Nazis; and a population that was more or less oriented towards the Protestant or the Catholic social ethics.

Relevance for German Unification

With unification, the political threat that certain policies in the West might be leaning towards communist and socialist ideologies, and argument usually exploited by liberals and conservatives, became obsolete. These socialist ideologies could no longer be associated with superpower authorities. Thus, it became much easier to discuss or even overturn long-existing liberal principles. In the case of Germany, many quasi guaranteed property rights quickly eroded such as the guaranteed claim to property in East Germany by those who were expropriated. The political system argued

that this was a necessary sacrifice for unification and a fast path to investment security. Expropriated groups who were opposed to this argued that this was the main reason for today's stagnating economy in the east and its loss of **headquarters**. In addition, the specific group of globally active medium-sized family enterprises that is the basis of Western German industrial – especially manufacturing – success, is missing completely.

Potential relevance for Korean Unification

Unification means a challenge for **public finances**. In order to prevent a large scale exodus from the Northern united part, income expectations have to be stabilized – as was done with East Germany. To guarantee a per capita endowment of about 60% of the southern income, the amount to be transferred would be much larger because of the difference in population proportions and lack of economic performance in the North as compared to Germany. A rough estimate of the costs derived from the German experience is given in Table 2.1.1. Comparing North Korea's per-capita GDP to South Korea's allows us to calculate the per-capita gap that needs to be bridged. If its GDP is initially 5% of South Korea's, then 55% has to be compensated to reach the stabilizing 60% level. This implies multiplying the South Korean per-capita GDP by 0.55 to obtain an initial transfer amount of US\$ 265 billion, which is 27% of its output. Given an average expenditure multiplier of 0.35 and a public share in the economy of 30% the level of South Korea, only 12% of these expenditures can be expected to be recaptured by taxes. 88% must be financed which results in a net transfer of 24%. This deficit will remain stubbornly high for quite some time.

Calculation of Public Support Expenditures

	Korea	Germany
Population Share North / East in Total (%)	33	20
Share of Per Capita GDP (%)	5	20
Gap against 60% Income (%)	55	40
Initial Transfer Amount (US \$1,000 / €)	265,697	166,053
Gross Transfer Share (%)	27	10
Average Multiplier (%)	35	80
Tax Share in GDP (%)	30	50
Net Transfer Share (%)	24	6

Source: BLUM (2013)

These values seem to be extremely high but, in fact, they are in line with those that only concentrate on the economic side. In Germany, about 15% to 20% of transfers went directly into investment, i.e. some 15 to 20 billion Euros, and were augmented by private-sector investment that was comparable if not twice the size (BLUM, SCHARFE 2002). Estimates calculated by Bang-Sik LEE (1993) and Charles WOLF (2006) run in the area of US \$20 to 50 billion of annual investments (capital costs), but they exclude social and political costs. These, however, are necessary to stabilize the agglomeration and social structure. The argument that even large income disparities of 50% to 75% (the Italian mezzogiorno is quoted by Charles WOLF (2006, p.686)) go against all European experience; the

usual equilibrium level is set at about +/- 20% of the average – and even Eastern Germany with a level of 75% of the West still loses population through emigration.

More important is whether South Korea is able to create a mission of unification and a passion for sharing with the disadvantaged population of the North in order to carry through this huge task of transferring funds and investing in the North, both financially and politically. No doubt, the elder population, which still remembers a united country, will respond positively towards unification. For the younger population, this response may be very different, primarily due to their very limited knowledge about the northern part of their country.

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W: Washington Consensus: The Importance of Good Governance

General Economic Relevance

The Washington Consensus was a recipe for economic policy. Its aim was to help in overcoming economic problems, especially in Latin America. It rested on three pillars: stabilization, privatization and liberalization, i.e. reducing the role of government in the economy, making it internationally more open; stabilizing the economy by changing basic structures, especially with respect to property rights; providing incentives to increase productive investment and often reduce (import-based) consumption (WILLIAMSON 1989). Within the context of the fall of the Berlin wall, the question was whether stabilization, privatization and liberalization policies should be preceded by an institutional framework to make plausible commitments for policy implementation or whether the policy itself would enforce institutional structure. In fact, this is the old controversy between (old) institutionalists and Anglo-Saxon liberals and it relates not only to transition economics but also extends into the general debate of stabilization efforts (WILLIAMSON 1989; RODRIK 2006). Many of the above-mentioned neoliberal policies enhanced the concentration of economic power in the countries to which they were applied. This has highlighted the central problem: concentrating on macro-economic adjustment without taking into account how necessary appropriate microeconomic and institutional structures are.

Conceptual Framework

The idea that national innovation and growth policies must be based on an incentive-competitive institutional structure follows the work of Friedrich LIST (1841) and later institutional and evolutionary economists. Their fundamental belief is that free market development is impossible without credible institutions. Thus, in reforming countries, their focus is on institutions, human-capital formation and good governance. This is in contrast with the neoliberal view that breaking up the old procrustean structure and preventing the development of **rent-seeking** is best done through fast reforms of the monetary system, free prices and the creation of private property rights. Without proper institutions, foreign credit and investment programs often fail or even produce adverse effects (STIGLITZ 2002), as the Russian case shows. Tax reforms, especially, must be institutionally feasible. The tax reforms promoted in the Soviet Union and Russia resulted in corruption and tax evasion, especially through barter, as the proper institutions were absent. The alternative proposal, stemming from the 19th century American tradition of organizing an inflation tax, was rejected and might have been more advantageous for long-term development. In addition, the success in implementing these policies may very much depend on the initial income distribution and the (privileged) access of the old nomenclature to privatized firms (ROSSER, ROSSER 2001).

Today, the lack of stability in the more peripheral post-transition countries of Europe shows that the importance of good institutions should not be neglected if reforms in the areas of stabilization, privatization and liberalization are to work.

Relevance for German Unification

With the unification, the West German institutional structure was exported to the East. It was made credible as experienced personnel, especially in the field of jurisdiction, accompanied these institutions. However, the over-institutionalization of many Eastern German **bureaucracies** prevented dynamic development in many cases. It was said that West Germany would never have achieved their “Wirtschaftswunder” with the **bureaucracy** installed in Eastern Germany at the beginning of the 1990s.

However, these new institutions were often unable to cope with the stabilization, privatization and liberalization policies imposed by the central government:

- Stabilization at all cost led to enormous moral-hazard problems as money poured into Eastern Germany, especially in the field of construction, and not only led to price hikes and **rent-seeking** but also to an adverse industry structure. Its adjustment at the end of the 1990s burdened the labor market and destroyed public and private wealth.
- Fast privatization led to the destruction of industrial research because no external buyer – Eastern Germans usually lacked the necessary cash – needed an additional research unit. Only the Lander which took on the responsibility themselves – in fact only two (Saxony and Thuringia) – are today the leading regions in Eastern Germany in terms of technology. Furthermore the Eastern German regions lack **headquarters**: Only some twenty of the 500 largest German firms are headquartered here – in terms of population or economic output, this figure should be somewhere between 70 and 100.
- Preventing the development of market power by Treuhand and the Federal Cartel Office implied that large firms were marginalized – often split into parts that made them even smaller than their international competitors.

Potential relevance for Korean Unification

Like Germany, Korea has the ability to quickly create credible institutions immediately following unification. However, an over-institutionalization of the economy should be prevented in order to make use of dynamic innovation forces in all fields: political, social and economic.

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X: X-Inefficiencies: Improving Allocation by Market Orientation

General Economic Relevance

Economic theory assumes that firms are output maximizers or input minimizers. If it also employs the best technology available, it is said to be X-efficient. The neoclassical theory assumes that X-efficiency is guaranteed as a result of competition and includes allocative efficiency (A-efficiency) as X-inefficient firms have to exit the market.

In reality, however, different technologies and remuneration for production factors coexist so that each company may be A-efficient, but competition pressure may not be strong enough to provoke more individual effort or the use of best-practice technologies. In addition, sunk costs and indivisibilities of production may limit market entry. When transitioning from a centrally planned to a market economy, institutional factors may play a role in promoting X-inefficiency as the ultimate economic and business goals change fundamentally: from premium maximization promoted by a strategy of modestly over-fulfilling weak plans to profit maximization. This means that an economy's entire steering and controlling system is turned upside down. Efficiency problems pile up as inputs, technologies and incentives are adjusted.

Conceptual Framework

The concept of X-inefficiencies was introduced by LEIBENSTEIN (1966) to explain efficiency problems in the economy that go beyond the allocation system of PARETO welfare theory. In fact, as the theory of the centrally planned economy suggests (KORNAI 1980), hoarding tendencies are strong in order to fulfill the plans and obtain premiums. Money is an internal exchange numeraire with no real external value and comparable to transfer prices within capitalist companies. At the heart of the problem lies the difference in the ability to gather information in centrally planned economies as opposed to market economies. As von MISES (1922) and HAYEK (1945) observed, the ability to use information is much more developed in the market system and, thus, the market system cannot be seen as the twin of the centrally planned economy. From a formal perspective there is the dual problem of optimization either in terms of quantities or in terms of values. Service sectors important to the processing of information and the generating of market transparency hardly existed in centrally planned economies. Their development is crucial for enforcing X-efficiency.

In the quest for efficiency, it should not be forgotten that capitalist firms try to differentiate themselves from competitors in order to capture differential rents. Research and development as well as innovation strategies need the prospect of profits as an incentive. Eroding all types of "inefficiencies" may result in a dull, neoclassical world without entrepreneurs. So the general message must be: The long-term erosion of rents must be guaranteed by open markets.

Relevance for German Unification

By dismantling the huge East German combines and splitting them up into some 15,000 limited companies, there was an attempt to enforce competition by completely eroding market power. However, the transition showed that neither A-efficiency nor X-efficiency could be attained quickly, as the inertia in the system was strong. Dilapidated technologies needed to be replaced, mentalities had to change and markets had to be conquered. Furthermore, subsidies granted for capital investments limited pressure as they encouraged the piling up of overcapacities. It took nearly one decade to make proper use of the high capacities initially put into place.

Potential Relevance for Korean Unification

It is important to generate a market environment that is not only partial to the reduction of A-inefficiency. It should also reduce X-inefficiency by enforcing competition in all markets. However, it will be difficult to avoid X-inefficiencies altogether, simply because investments are discrete and over-investment is the price paid in a transition period where financial incentives for investment are huge. It is extremely important not to allow X-inefficiencies to migrate from the centrally planned system into the market system.

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Y: Yield: Harvesting the Long-Term Economic and Political Rewards of Unification

General Economic Relevance

Unification may not only be seen as a national task and occupation but also as a business case. Will it pay off? When does the investor, the richer part, break even with its investment by recuperating sufficient profits? Will the formerly underdeveloped part overtake it because of its ability to jump onto a technology trajectory? Will there exist a sufficient pressure to encourage institutional reform? And, last but not least: Will industry structure enable a sustainable development or will the formerly underdeveloped part be a permanent drag on the richer part's financial resources?

Conceptual Framework

On the business level, the sum of individually successful investments must generate profitability on the national or the global level. The truly important side conditions are the stability of the economic rules and, thus, the existence of institutions that provide credibility and reputation. Initially, the most important production factors are natural resources including land, labor - especially human capital - and physical capital that must be optimally mixed (LIST 1841). The second source is exchange and trade in the classical tradition of economics (SMITH 1776; RICARDO 1801). Finally, positive external economies such as economies of scale, scope and network economics matter. They may create an additional positive momentum that lays the basis for leap-frogging in technological development (BREZIS, KRUGMAN, TSIDDON 1993). However, negative effects are also positive in the sense of economic wash-out effects and cumulative decline (HIRSCHMAN 1958; MYRDAL 1957). Migration, availability of technologies - especially general purpose technologies (GPT, HELPMAN 1998) - that create technological spillovers and lead to a fast dissemination are important.

Industry structure matters! The manufacturing sector and its ability to produce tradable goods is able to generate the necessary surplus in outside markets to finance the initial investments and yield interest on the capital inflow because. As any capital inflow implies the transfer of property rights to the outside world, only through such revenues will the developing region be able to first reduce the current accounts deficit, in the long-term produce surpluses and repatriate its property.

Relevance for German Unification

After the war, the coal and steel region of North Rhine-Westphalia had to share large amounts of its tax revenues with the poorer regions of the South to promote their development. This meant that North Rhine-Westphalia always had less demand than it produced in total production. This generated low price levels. In Bavaria, these funds were mostly used for development, especially to finance high technology imports to modernize industry. This implied that no price effect in the sense of **Dutch Disease** occurred – a lesson, because this message was often ignored during unification.

The transfer of money from Western to Eastern Germany, especially in the form of investments, has resulted in a situation where many property rights in Eastern Germany are now in Western German

or international hands. Many of these investments are highly profitable, often are large “extended workbenches” but reduce the savings in Eastern Germany for the benefit of Western Germany where the initial capital investment originated. This implies that the still existing trade deficit is presently increased by capital outflows. This reduces the purchasing power in Eastern Germany.

Small and medium sized enterprises as a base for individual **entrepreneurship** played an important role in expanding the economy. Against the background of global competition, many still are below a critical level in terms of firm size. However, the ability to include them in **clusters** has generated stability and success in foreign markets. This especially holds in manufacturing. The long-term view must be to develop “global medium sized enterprises” (GMEs), in Western Germany a backbone of economic strength and, because of family ownership, of economic and social sustainability.

On the technological level, many success stories can be observed, for instance in the area of renewable energies, where a capability has developed into an industrial leader and is exploiting an existing global technology path. However, activities meant to promote industry, especially the demand-oriented subsidization of industry, have generated an industrial crisis that endangers this initially positive development.

Last but not least, investment in leading technologies in the East has also generated competition among the German regions and promoted **innovation** and reforms in the field of regulation, especially labor market regulations. These reforms came from the East, spread to the West and modernized Western Germany in a way that has made it more stable in the present economic crisis.

Potential relevance for Korean Unification

It is important that investments in North Korea are based on latest technologies once the necessary skills have been established. This can be done in a parallel. Trying to stabilize the North with old technologies not only generates more migration pressure on the South but neglects the fact that in the medium-term, North Korea will become a high-wage country. As a united Korea would form one economic area, low-wage regions would promote outmigration and persistent **underdevelopment**. Furthermore, South Koreans should see unification as a challenge for modernizing their own area through the competition and the innovation stemming from the North Korean region. Finally, the relevance of a stable medium-sized enterprise structure should not be neglected – for both parts of Korea – especially its importance for a stable middle-class.

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Z: Zombification: the End of Entrepreneurship

General Economic Relevance

Zombies are the undead or people robbed of their souls. Zombification is a process by which healthy people are turned into zombies and robbed of their free will. In many films, it is portrayed in a Dracula-like manner where zombies propagate by biting and thereby infecting healthy individuals. The idea is not only to obtain their victims' blood but also their brains. This relates to a more advanced elaboration, where zombie status is a result of a virus infection, not magic.

Zombification was introduced into economic reasoning by Edward KANE (1989, 1993) who argued that keeping insolvent savings and loan institutions viable using taxpayer money would invec still healthy banks. In fact, it becomes an economic concept once it is applied to the SCHUMPETERian concept of entrepreneurship (SCHUMPETER 1912). Bankrupt firms are prevented from exiting the market and, because of their interaction in factor and goods markets, infect the whole economy. Zombie banking has become commonplace in the present financial crisis. Bankrupt banks are saved by public money and their existence is safeguarded. This distorts markets because the costs of risk do not have to be fully internalized in prices. Often the banks hand out loans to firms that are at the brink of collapse, and they are not forced to exit. A new zombie is created which starts to infect healthy firms that have difficulties in competing against public funds. This distorts the real economy.

Zombie competition is very real in post-transition situations. In terms of privatization, good firms are sold earlier than bad firms. The latter, subsidized by government and thus effectively protected against market exit, will penetrate markets, distort prices and make life difficult for other firms that have to rely on profits for their existence. The phasing out from a centrally planned economy to a market economy is always accompanied by subsidizing structures and thus encounters the danger of zombie competition. A new aspect of zombification comes from extensive demand generated by government in order to stabilize the economy. This may make sense under conditions of a cyclical crisis but not as a method to combat structural problems. Demand-side policies as a remedy against false economic structures are a sort of economic doping that leaves the firms exhausted and deprived of their entrepreneurial capacities: their spirit of competition and their innovation capacity.

Conceptual Framework

Following the innovation theory of Joseph SCHUMPETER (1912, 1943), new firms enter the market and force old firms to exit. This "creative destruction" is impeded once government subsidizes and thereby supports inefficient structures. There may be an important **rent-seeking** element in such a situation, especially when large entities, being at the end of their life cycle, put pressure on politics in order to survive and save jobs. The MARXist theory of state-monopolistic capitalism argues that the taking over of failing firms by government is a first step towards a revolutionary reorganization of the economy. It is the middleclass which is most difficult to include in a central planning system whereas large companies can be controlled without complications. Zombification of an economy

may thus be seen as an intermediary state along the way to an end of the liberal market system. It destroys the ability of free markets to transfer necessary information on scarcities (HAYEK 1945).

Once a sufficient share of the international economy is zombified, central banks are forced to keep interest rates low. This destroys the ability of the exchange-rate mechanism to buffer different levels of economic performance as most adjustments relate to changes in currency-rate expectations. These cannot be formed if interest rates are artificially driven down to nearly zero. Thus, one important mechanism that adjusts different levels of competitiveness among rivaling economies is weakened. The permanence of low interest levels may further aggravate zombification and even healthy firms may make inefficient investments with low returns consistent with the low interest rate. Thus, economic progress is restricted and bad investments, insufficient productivity and economically unviable firms emerge until interest rates rise again.

Relevance for German Unification

There is an important Treuhand role in zombie competition. As privatization was based on the quality of assets and technology, the first firms to be sold were often those who faced competition from non-privatized entities. Sometimes they had even been part of the same state holding (Kombinat). This was an enormous problem for small and medium-sized enterprises. In fact investment incentives reduced the cost of capital to levels against which normal firms were unable to compete. At the same time they generated inefficient allocation in the firm and distorted competition – and thus the economic selection system.

Potential relevance for Korean Unification

The zombie-competition problem in privatization has to be looked at and needs a strategic answer. Poor quality enterprises that are still held by government may ruin good enterprises. In the long run, an X-inefficient economy may prevail.

A government faced with these problems may resort to using economic instruments that lead to a productivity boost, i.e. subsidies, especially for capital investments, and demand-sided policies. Both may trigger an additional zombification. Once the emerging zombie bubble comes under pressure, banks may face solvency problems because of an increasing threat from bad loans. Government may be tempted to come to their aid. But any insufficient recapitalizations may encourage banks to hand out even more money to zombie firms to prevent their collapse, i.e. write-offs, thus further aggravating the problem.

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Vade Mecum for Korean Unification

한국 통일의 필수 안내서