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Veblen, Myrdal, and The Convergence Hypothesis: Toward and Institutionalist Critique

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Abstract: An Institutionalist critique that draws from selected contributions of Veblen and Myrdal initiates a convergence debate. Challenged is a Neoclassical interpretation of economic processes expected to lead toward a catching up with respect to per capita output of Germany's poorer eastern region with the richer western region. Economic method is considered, and the Institutionalist School of Thought rooted in contributions of Veblen as well as Myrdal is touted for offering higher levels of explanatory power than the Neoclassical School. We challenge the usefulness of laws in Economic Science, and especially their applicability to the empirical economy. Instead of automatic forces driving a *meliorative* trend, we seek to establish that human agency and policy play determining roles in affecting economic and societal outcomes in Germany's eastern region.

Keywords: convergence debate, Eastern Germany, Gunnar Myrdal, institutional economics, Thorstein Veblen

JEL Classifications: B15, B25, B52, P25

Do regions tend to converge with respect to per capita output over time? Answers to this question lead to conflicting interpretations and what should be noted as a convergence debate. This debate raises questions related to economic method. The Neoclassical and Institutionalist Schools of Thought with their respective, underlying methods serve as the two positions in the convergence debate presented in this inquiry. With its historical division into eastern and western regions, Germany in the reunification era serves as the single case reference.

This inquiry seeks to broaden the convergence debate away from its domination by the neoclassical method relied upon in a body of literature generated by Robert

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Barro and Xavier Sala-i-Martin, especially their seminal paper, "Convergence Across States and Regions" (1991). We introduce key contributions from the Institutionalist School of Thought, specifically ideas advanced by Thorstein Veblen at the start of the twentieth century, and more than one-half century later by Gunnar Myrdal.[1]

What interests us is the explanatory power – or lack thereof – bound up in a school of thought and its underlying economic method. With this inquiry we seek to convince the reader that the level of explanatory power integral to the Institutionalist school and its method offers a more comprehensive account of the interregional reality emerging in Germany in the reunification era. Strengths of this school are contrasted with shortcomings of the Neoclassical school.

On Method

Tony Lawson (1994; 1997; 2003) considers scientific method and its relationship with Economic Science. More specifically, Lawson borrows from the philosophy of science in an effort to better illuminate key connections between method and the resultant theory. Integral to his contributions to "critical realism" Lawson's reality project delves into ontology, the branch of philosophy concerned with notions of being. Ontological inquiry considers what exists and what the nature of existence entails. In exploring ontology Lawson offers a critical perspective for helping us understand the complex nexus between the philosophy of science, scientific method, and economic method — and then how economic method connects with reality. Most importantly, Lawson notes that every school of thought includes an underlying ontology: that is, a set of underlying presuppositions about the nature of reality.

For Lawson (1997; 2003), as well as for our purposes, explanation ought to be the primary objective for scientific endeavor. Lawson takes a practical perspective, holding that economic science should serve to assist us in understanding and explaining reality. Lawson (1997, 89-91) relies on the term "explanatory failure" to describe when a method fails at helping us understand reality.

Integral to his consideration of explanatory power Lawson explores limitations associated with certain forms of scientific reasoning. Lawson focuses upon neoclassical theory and its deductive approach that relies upon a set of preconditions and governing laws to then deduce a given outcome.[2] Deductive logic tends to be truth preserving, which means that given a correct and complete set of preconditions and the proper use of laws, the deduced outcome is considered valid. However, if there is an error with any piece of the antecedent conditions, this could lead to invalid results.

Deductivism lends itself toward prediction. Though, Lawson notes that the predictive powers of economic theory frequently prove unreliable. Deductive explanation follows the "covering law" model, suggesting that deductive explanation takes the form of subsuming the event-to-be-explained under one or more covering laws. If this is done then the phenomena can be considered "explained." The "symmetry thesis" describes conditions when deduction is used both for explanation as well as for prediction.

Lawson (1997, 19-20) teaches us that the neoclassical reliance upon deduction can be traced back to contributions of Scottish Enlightenment philosopher David Hume. Most notably for our purposes is the resultant legacy of positivism within neoclassical method. Positivism stands as an epistemological doctrine that limits our knowledge to sense experiences. If knowledge is only derivable from sense experiences, then knowledge is thus limited to atomized entities. The implication is that atomism eliminates the possibility of knowing relations or connections between entities. Hume asserts that causation, what can be considered the most important connection for scientific inquiry, is merely a customary notion for which we have no logical reason for believing. Hume suggests that we cannot observe the necessary connections needed for inference of true causation. It follows that since we cannot directly experience causation; therefore, we cannot know causation. And, so, what we observe is really just the "constant conjunction" of events.

Central to the ontology of neoclassical economics is that social reality is made up of atomistic entities whose relations and interrelations we cannot know. While a variety of consequences follow from the neoclassical school's use of deduction and the adoption of an atomistic ontology, this inquiry is concerned with two significantly detrimental dimensions, namely: universalism and the closed system approach.

Universalism implies that laws can be applied independent of historical time and geographical place. Atomism leads to universalism in that by denying the relations between entities there ought to be no difference in the applicability of laws based on differences in such relations. In a similar vein, deduction requires the adoption of a closed system approach since a valid deductive argument must include all relevant preconditions. Since the deductive method relies upon the use of laws, this method tends toward explanatory failure when considering an open system in which the strict determinacy of a law dissolves. Where the neoclassical method clearly fails is in the assumption that economic laws exist and hold up in reality.

Lawson (1997) teaches us that economic and social reality remain open, not closed. And, that reality is not at all atomistic and universal, but rather substantive and subject to change. As long as economic agents are capable of making choices, then openness is guaranteed and economic reality cannot be understood as closed. More significantly, Lawson teaches us that so long as Economics remains a social science, economic reality will remain inherently relational and dependent on these relations, thus precluding any possibility for universalist generalizations.

What interests us in this inquiry is ontology, the "what is?" of Economic Science. Ontological preconceptions shape the resultant theory and also determine its applicability. Like Lawson, we accept that a method relied upon in economics should be judged from its ability to explain reality. We also accept Lawson's idea that "explanatory failure" would likely result when choosing an inappropriate or deficient economic method.

As we consider the convergence debate and whether an economic method serves to explain or fails to explain economic and societal reality, we find that the neoclassical school of thought, with its attendant and underlying method, has dominated the explanation for convergence between Germany's two regions.

However, the neoclassical method has failed in explaining the reality. In other words, both the processes driving convergence, as well as the time-line for per capita output convergence between the eastern and western region of Germany have not taken place as posited and forecasted in the writings of Barro and Sala-i-Martin (B-S). Their error arises as the neoclassical school and its underlying method rely upon an uncritical acceptance that laws do indeed exist, and that laws posited in economic science hold up in reality. And, that laws offer predictive and explanatory powers for present and future economic activity, including ultimate economic outcomes such as per capita output convergence between Germany's two major regions.

What we seek to establish with this inquiry is that the "Law of Diminishing Returns," an axiom central to the neoclassical method – and this law's predicted effects on driving Germany's interregional convergence – fails to hold up in a manner that ensures, or even drives, per capita output convergence. Our critique of the convergence hypothesis takes us to Thorstein Veblen, as many decades prior Veblen had expressed doubts regarding laws and Economic Science.

Neoclassical Theory, Method, and the Convergence Debate

Research of B-S purports that (1992, 223) "automatic forces" drive per capita output convergence. Moreover, their notion of automatic forces as these relate to their convergence hypothesis is readily reducible to "diminishing returns" that when applied to capital bring about improved economic outcomes for a poorer region, state, or country (B-S 1991). Improved economic outcomes occur as capital in a higher per capita output and hence higher wage region is subjected to diminishing returns. Seeking higher rates of return, capital then moves outward to a lower per capita output region with comparatively lower wages and benefiting from similar levels of technical development, as technology is also assumed to move freely across borders. Improved economic outcomes are thought measurable as a lower per capita output region achieves relatively higher rates of per capita output growth over time. Relatively higher rates of per capita output growth then drive the poorer region to catch up, and, to ultimately achieve an auspicious economic outcome evinced by a per capita output convergence with the wealthier region.

Tweaked and stated more formally: the convergence hypothesis is based upon a belief in the "Law of Diminishing Returns" and its application to capital, that is assumed and purported to bring about a favorable trend.[3] Moreover, this law governing capital's behavior is thought universal. That is, this law can be applied broadly to explain a range of economic processes at work. In addition, the law can also be relied upon to forecast economic trends affecting outcomes for geographic units of various sizes, such as regions, states, and countries, and at various levels of economic and societal development. This would include a region in transition from a Soviet-type planned to a social market economy increasingly governed by neo-liberal policies.[4] In this manner diminishing returns and its purported effects on capital's movement is applied to confidently explain economic processes and forecast future developments in the eastern region of Germany in the reunification era, and wholly

independent from what we would define as human agency that formulates and implements economic policies.

The convergence hypothesis is supported with an identity that seeks to model transitional growth processes (B-S 1991, 108-9). Namely:

$$\left(\frac{1}{T}\right) * \log\left(\frac{y_{it}}{y_{i,t-T}}\right) = x_i^* + \log\left(\frac{\hat{y}^*}{\hat{y}_{i,t-T}}\right) * \frac{\left(1-e^{-\beta T}\right)}{T + u_{it}} \qquad (1)$$

Where: i indexes the economy;

t indexes time;

y_{it} denotes per capita output or income;

x^* is the steady state per capita growth rate;

$\hat{y}_{it}$ is output per effective worker (numbers of workers adjusted for the effect of technological progress);

$\hat{y}^*$ is the steady state level of output per effective worker;

T is the length of the observation interval;

β is a coefficient noting the rate of convergence;

u_{it} is an error term.

On the production side, this model assumes diminishing returns to capital, exogenous technological progress, full employment, a fixed relation between the labor force and population, and exogenous growth of population. This identity assumes that on the consumption side the saving rate derives from choices made by utility maximizing households over an infinite horizon. The steady state value of output per effective worker $\hat{y}^*$ depends on parameters of technology and preferences (B-S 1991, 108-9 [represented mostly verbatim]).

If diminishing returns were to affect capital and its movement, would the effects prove sufficient to drive per capita output convergence between the two German regions? Our answer is "no." That is, with 20 years of data at hand, there exists no evidence for answering this question affirmatively.

The diminishing returns and capital nexus need to be considered in its broader complexity and not in its assumed simplicity. For example, for diminishing returns and capital's movement to the poorer eastern region to drive per capital output convergence, this would assume that: 1) capital would take an appropriate composition of investment; and 2) capital's output would find warranted levels of effective demand high enough to contribute toward relatively higher rates of regional economic growth in per capita output over time.

Important to note is that capital in western Germany also seeks out production in other areas with lower costs than eastern Germany. For example, the western Czech Republic, western Poland, and even southern China also lure capital from western Germany with prospects of rates of return more promising than what the eastern

region with its strong Euro offers. That capital is subjected to diminishing returns is one thing. That capital's outward movement from capital rich western Germany would drive the eastern region toward an equalization in per capita output over time is another. This assumption is far-fetched: especially in a world in which investment capital could flow freely across national borders seeking more favorable future rates of return. It could also be the case that in the western region capital benefits from agglomeration economies, thereby rendering rates of return higher than in the eastern region. No matter the reasons, there is no evidence that the effects of diminishing returns to capital in western Germany prove sufficient to provide for a catching up in per capita output in the eastern region that would ever lead toward per capita output convergence.

In short, the five assumptions associated with the B-S convergence identity fail to hold sufficiently for the region of eastern Germany in the reunification era, and these failures shall be addressed in more detail below. If these assumptions fail to hold sufficiently to drive the eastern region toward per capita output convergence, should we then suspect that the neoclassical method with its Law of Diminishing returns as well as other laws upon which related assumptions are based, suffers from explanatory failure, at least when applied to Germany's interregional case under consideration? We think so.

From Economic Processes to Forecasts

B-S (1991, 154) rely upon their convergence hypothesis as well as the explanatory power of their convergence identity to forecast that the economy of the eastern region would exhibit rates of per capita output growth running consistently higher, and at least at 1.4% per annum above the annual rates for the western region. Assuming that a minimum of 1.4% annual growth rates would be sustained over the long term, B-S estimates that 35 years would then be required to close half of the per capita output gap with the western region.

B-S accept the study by Akerlof et al. (1991) that placed East German labor productivity at the end of the GDR era at one-half of the western level. If their predictions for such a trend were to prove true, then the eastern region's per capita output should exhibit a steady catching up and thereby reach 75% of the West German level by year 2026. Data suggest the emergence of an entirely different dynamic than purported.[5]

Empirical findings show that leading up to 1997 the eastern region closed a sizeable portion of the per capita output gap at significantly higher annual rates than forecasted. These higher than warranted growth rates drove per capita output to 68% of the western region's level in just six years time. However, starting in 1997 and running through 2008, per capita output growth rates have tended to run below the 1.4% annual rates that B-S deemed were warranted, and per capita output remains below 70% of the western region's level (see Table 1). This notion that catching-up in per capita output would take place at steady, incremental rates proves far-fetched.

Table 1. Growth Rates Of Real GDP Per Capita For Germany and Its Two Regions

Year	Germany	Western Region	Eastern Region	Warranted (% West + 1.4)	Convergence Gap in % Points
1992	1.5	0.3	12.5	1.7	10.8
1993	-1.5	-3.0	13.3	-1.6	15.0
1994	2.4	1.1	12.9	2.5	10.3
1995	1.6	0.9	6.8	2.3	4.5
1996	0.7	0.3	3.2	1.7	1.5
1997	1.6	1.5	2.2	2.9	-0.7
1998	2.1	2.1	1.2	3.5	-2.3
1999	1.9	1.7	3.4	3.1	0.2
2000	3.1	3.2	2.1	4.6	-2.5
2001	1.1	0.9	1.8	2.3	-0.5
2002	-0.2	-0.5	2.0	0.9	1.2
2003	-0.3	-0.5	1.5	0.9	0.6
2004	1.2	1.0	2.4	2.4	0.0
2005	0.8	0.8	0.8	2.2	-1.4
2006	3.1	2.9	4.0	4.3	-0.3
2007	2.6	2.5	3.2	3.9	-0.6
2008	1.5	1.4	1.9	2.8	-0.8

Sources: Statistisches Landesamt Baden-Württemburg. *Volkswirtschaftliche Gesamtrechnungen der Länder (VGR) (National Accounts of States].* Stuttgart, 2009; Calculations of Authors.

Policy decisions that led toward reductions in levels of investment for the eastern region generated a slowdown in regional growth rates for the period after 1996, causing the interregional per capita output gap to not diminish much further. This observations flies in the face of the B-S forecasts. Rather than the eastern region moving incrementally toward Beta and Sigma convergence, the economy of Germany's eastern region exhibits a proclivity — since 1996 — to generate annual output growth rates that, on average, run consistently lower than their warranted rates, thereby suggesting the persistence of regional inequality instead of a per capita output convergence at some far distant date in the future.[6] In short, nothing found in the course of our research suggests that Germany's reunification program has been governed by a law, like the Law of Diminishing Returns, that runs independent of human agency entering as policy-making.

Along with decisions that led to declines in rates of investment first evident with 1996, two additional components of policy-making that still generate profound influences over the course of economic activity in Germany's eastern region were introduced at the start. For one, the German Monetary Union (GMU) that took place in July of 1990 introduced the strong Deutschmark to the eastern region, rendering

the bulk of East German industry noncompetitive at the start of the reunification project. The GMU was followed immediately by a privatization program led by an agency chartered as the *Treuhandanstalt* (Kaser 1996). The Treuhand is noted for systematically shifting ownership over productive assets – such as factories, forests, and farms – to individuals and enterprises based in the western region, rendering the eastern region largely void of large-scale enterprises specializing in the production of either finished goods, or services that also includes banking and insurance (Hall and Ludwig 2006; 2007). One result is a clear absence of corporate headquarters that generates a range of direct as well as cumulative effects that are considered below.

The Institutionalist School and Method

One of Veblen's often overlooked and seldom referenced articles, "The Preconceptions of Economic Science" (1900), serves as the key literature source for establishing an Institutionalist approach to the convergence debate. With its focus on interregional dynamics, Gunnar Myrdal's *Rich Lands and Poor: The Road to World Prosperity* (1957) compliments Veblen's over-arching critique of neo-classical theory.

In a sarcastic tone for which he is often heralded, Veblen (1900, 242) defines the second canon of "truth" of neoclassical thinking as: "an uncritical conviction that there is a meliorative trend in the course of events, apart from the conscious ends of the individual members of the community."

This reads as a profound statement, for these words contain a portion of the essence of what has developed into the field of inquiry often defined as Original Institutional Economics (OIE).

How should one interpret the meaning of the term "*meliorative* trend?" Our reading of Veblen suggests that a *meliorative* trend should make for the better, that is, bring about improvements. Placed in context and expressed more figuratively, a *meliorative* trend would prove favorable, leading toward auspicious economic outcomes that we suspect could also include per capita output convergence between two regions.

Appreciating Veblen's penchant for sarcasm we also read into this second canon a converse, suggesting that one "truth" of neoclassical theory holds on to the existence of laws in economics, and that laws can be applied (and are thought to hold) more or less universally across time and place. That is, a law or laws could be applied to different societies and their special cultural characteristics, and to economies with differing levels of economic development.

Veblen deserves to be duly noted for offering important and critical insights into the neoclassical project early on. Tony Aspromourgos (1987, 625) even credits Veblen with coining the term "neoclassical economics" which – for better or worse – seems to have stuck.

What would emerge in the United States as the Institutionalist tradition of economic inquiry finds its roots in ideas advanced by Karl Knies and Gustav Schmoller, leaders, respectively, in the older and younger variants of the German Historical School (Blaug 1986, 213-214). Members of this school professed

skepticism that economic activity was governed by scientific laws, in general, and remained fully opposed to the notion that economics could offer scientific laws or even rules with universal applicability, especially across countries with different historical experiences and hence with different cultures. Richard Ely studied under Knies at the University of Heidelberg (Blaug 1986, 72-74), and later brought both Knies and Schmoller's tradition of *Historicismus* to Johns Hopkins University. Ely joined the Economics Department in 1881, when Veblen was also there studying (Griffen 1998). Though difficult to document, it could be the case that Veblen formulated his ideas regarding his doubts about laws in Economic Science when at Hopkins, and through his association with exponents of the American wing of the German Historical School.

On top of the neoclassical method's penchant for and belief in laws with universal applicability, we also understand Veblen suggesting that neoclassicals hold on to the canon that a *meliorative* trend proves integral to the workings of the economy, and takes place wholly independent of human agency and related policies that might affect outcomes.

Myrdal On Regional Theory

Gunnar Myrdal relies upon a method rooted in the Institutional tradition, what Allen Gruchy (1974, 294-295) defines as an "open system" of thought. Myrdal's contribution to regional theory exhibits all of the trappings of an open system approach as the relevant variables could potentially include *n*-number. In addition, Myrdal suggests that a broad spectrum of variables need to be included and considered for their roles in affecting regional development and underdevelopment. Moreover, for Myrdal (1957, 18) relevant variables are noted to be in a "circular and causal interrelation." Forces at work could be judged as short term and subject to sharp disturbances. Other forces could register as more constant determinants. In the philosophical tradition of Charles Peirce and Veblen — who would emerge as one of Peirce's inspired students (Hall and Whybrow 2009) — Myrdal does not separate between the physical and the metaphysical. He notes the importance of such non-economic variables as "attitudes" that human beings hold, and how these attitudes might be held by an individual, and also held collectively by numerous members of society. In Myrdal's understanding of the world, attitudes could as readily shape economic policies that generate direct effects plus cumulative effects, as human attitudes could be shaped by economic as well as non-economic forces.

Noting it difficult to separate economic variables from other factors both human and societal, Myrdal (1957, 20) could be quoted: "everything is cause to everything else in an interlocking manner." Yet, cause and effect are not limiting in Myrdal's world view, as he notes a "principle of cumulation" suggesting: "that the final effects of variables could promise benefits of vastly greater magnitude than the costs of the policies that generated these benefits" (1957, 21).

Related to his openness with respect to types of variables and their behaviors, outcomes related to interregional dynamics also remain open, and in an important

sense. Phrased differently, a Hollywood-styled happy ending associated with per capita output convergence is not at all preordained. Likewise, unfettered markets *a la* Barro (1996) do not necessarily lead to favorable interregional outcomes, especially when a lower per capita output region remains juxtaposed to a higher per capita output region. More specifically, and fully consistent with Veblen's thinking, no *meliorative* trend determines either processes or future outcomes when employing Myrdal's open system approach. In Myrdal's perspective per capita output divergence could also emerge from a dynamic interrelation and interaction between regions, leading toward a poorer region being further reduced as an economic and social periphery.

In another sense Myrdal stresses the importance of human agency as policy in affecting and generating outcomes. This places his thinking in line with what we interpret as the Veblenian converse of the second neoclassical canon. Namely, that "conscious ends of the individual members of the community" (Veblen 1900, 242), emerging as human agency, could indeed generate policies that exert determining effects on economic and societal outcomes.

Myrdal's thinking deserves careful consideration when formulating an Institutionalist critique of the convergence hypothesis with its closed system approach. Barro and Sala-i-Martin advance in a singularly minded way that an unfettered market proves essential for achieving per capita output convergence between and across regions. In challenge, Myrdal (1957, 26) – with his open system approach – views market forces with a healthy level of skepticism, even suggesting marked forces could "increase rather than decrease . . . [regional] inequalities."

If behaviors of variables – such as market forces – are not narrowly thought to generate a *meliorative* trend, then potential outcomes remain wide open and policy decisions could then be seen to play determining roles. Myrdal (1957, 18) further suggests that regions should be considered in their contexts and how contexts lead to "circular and causal interrelation" between regions. This line of thinking allows Myrdal to explore the potential emergence of at least three backwash effects when a poorer region is juxtaposed to a wealthier region.

The first backwash effect (Myrdal 1957, 18) occurs as a wealthier region generates outward effects spurring, for example, out-migration from a lower wage region. Second, capital flight could occur as capital leaves a lower per capita output region for a higher per capita output region. Third, a higher per capita output region might benefit from unequal relations in trade. Myrdal (1957, 31-33) also considers "spread effects," that could be thought of as "centrifugal" effects spinning out of a lower per capita output region as economic growth ensues. In Myrdal's open system approach a region faced with developmental challenges needs to be understood within the context of its proximity to a more successful, higher per capita output region, and through an interplay of these backwash and spread effects.

Challenging the convergence hypothesis with Myrdal's open system approach to regional studies adds on to Veblen's insights into the neoclassical method made at the start of the twentieth century, just more than fifty years before Myrdal published his thoughts regarding forces contributing to regional inequality. The strength of Veblen's ideas are rooted in the fact that his thinking is often philosophical, and the

ideas he introduces also over-arching, creating something on the order of an umbrella under which more specific ideas could be generated and then relied upon for increasing the explanatory power of the Institutionalist school and its open system approach to analysis. Clearly, Myrdal's contribution to regional theory falls under Veblen's theoretical umbrella, encouraging investigations into processes generating circular and cumulative effects for regions. Combining the overarching philosophical perspective of Veblen with Myrdal's open system approach to regional studies — and juxtaposing their Institutionalist approach to the use of neoclassical method — helps us explain why the convergence project with its closed system approach came up with such a spurious understanding of processes at play — as well as forecasts predicting future outcomes that register as far fetched.

Unemployment and Its Cumulative Effects

The B-S reliance on the neoclassical method leads to their acceptance that Economic Science is indeed based upon laws, like the Law of Diminishing Returns. Their hypothesis advances the idea that when diminishing returns are applied to capital, automatic forces would then lead toward interregional per output convergence. In addition, their reliance on the neoclassical method leads to their relying on a range of assumptions. One assumption is that markets are supposed to function under perfectly competitive conditions. This assumption was advanced by Alfred Marshall, and remains integral to the neoclassical method. Applying Marshall's assumption to labor markets, the B-S identity holds that economies operate at full employment. This means that unemployment does not exist, and that business cycles that might affect capacity utilization are ruled out of existence.

However, that unemployment does indeed exist in both the eastern and western regions of Germany suggests their method suffers explanatory failure, as "what is?" proves vastly different from what their method and assumptions hold.

The reality suggested by the data shows that rates of unemployment in the eastern region have failed to fall below 14% of the civilian labor force over the last 17 years considered. Germany's eastern region exhibits unemployment rates that have tended to run, more or less, at double the rates of the western region, reaching as high as 20% of the civilian labor force for years 2003-2005 (see Table 2). These relatively higher rates of persistent unemployment generate a range of cumulative effects that the Institutionalist method helps us consider, with the first effect registering as an outward push to potential migrants, as a backwash effect that Myrdal's (1957, 18) open system approach emphasizes.

In addition, the western region with its relatively lower rates of unemployment serve as a lure, pulling those seeking greener labor market pastures. Since 1990 the respective workforces in the two regions of Germany compete within the same national labor market. With his open system approach toward interregional dynamics, Myrdal recognizes that migration would ensue when two regions remain juxtaposed and unemployment rates register as disparate.

Table 2. Unemployment Rates For Germany and Its Two Main Regions (Unemployed Ss Percent Of Labor Forces* For Selected Years)

Year	National Averages	Eastern Region	Western Region
1989		n.a.	7.9
1990**		n.a.	7.2
1991	7.3	1.2	6.2
1992	8.5	14.4	6.4
1993	9.8	15.4	8.0
1994	10.6	15.7	9.0
1995	10.4	14.8	9.1
1996	11.5	16.6	9.9
1997	12.7	19.1	10.8
1998	12.3	19.2	10.3
1999	11.7	18.7	9.6
2000	10.7	18.5	8.4
2001	10.3	18.8	8.0
2002	11.8	19.2	8.5
2003	11.6	20.1	9.3
2004	11.7	20.1	9.4
2005	13.0	20.6	11.0
2006	12.0	19.2	10.2

*Rate of unemployment defined as share of registered unemployed relative to total number in civilian labor force.
** In October of 1990 what was the German Democratic Republic from 1949 through 1989 was integrated into the nation of the Federal Republic of Germany.
Source: Bundesagentur für Arbeit. (Federal Labor Agency) *Arbeitsmarkt in Zahlen.* (*Labor Market Statistics*). Nürnberg, Germany. January, 2007.

Barro and Sala-i-Martin also consider the role migration plays in promoting interregional convergence. However, their understanding runs counter-intuitive to Myrdal's. B-S (1991, 126-136) note that as migrants are attracted and move to greener labor market pastures, the rising population denominator in the higher per capita output region, relative to the existing capital stock, accentuates diminishing returns to capital. This is suggested to cause capital to flow out at an accelerated rate, seeking higher rates of return in a lower per capita output region. This movement of capital is purported to accelerate the speed for catching up.

With their closed system approach labor is limited to two categories. There is "raw" labor possessing no human capital, and there is "skilled" labor possessing some (B-S 1991, 126-136). However, difficulties arise when applying the former category to the German case, as members of the society tend to acquire education and training that is denoted with degrees and certificates. That the lion's share of Germany's

education system is generously supported by public funds makes education and training readily accessible and essentially a public good. Then, if we consider outmigration of the eastern region's skilled labor, we also have to consider a host of cumulative effects generated, none of which appear to give rise to a *meliorative* trend contributing toward per capita output convergence. Effects of higher rates of unemployment appear to reinforce the persistent tendency for interregional inequality. This is what Myrdal's way of thinking also suggests.

A neoclassical theorist like Burda (1993) and Burda et al. (1998) failed to anticipate resurgences in rates of regional outmigration that accelerated with year 1998. An Institutionalist and open system approach leads toward an understanding that negative birthrates should be seen as cumulative effects associated with the juxtaposition of the poorer eastern region to the wealthier western region and the associated outmigration. Effects of negative birthrates coupled with outmigration register in the data. For each year of the last 17 years considered, we find more deaths in the eastern region than live births (see Table 3). Population decline then emerges as a cumulative effect related to policies that have promoted and also maintain regional inequality. In this environment of high unemployment, job uncertainty, and comparatively lower wages, along with median household incomes stagnating at less than 70% of the western level, young couples appear to have systematically reduced the number of children brought into their world strained by economic challenges facing their eastern region.

Another and more complex dimension arises as an additional cumulative effect through this juxtaposition of regions, and with the eastern region exhibiting double the rates of unemployment. Data suggest that the largest group migrating out fall into the 18 to 30 age-range (Mai 2004). While both young men and women tend to emigrate out of the eastern region in about the same proportions, Steiner (2004) notes that a comparatively larger number of men return. This tendency suggests that a comparatively larger percentage of young females – as interregional migrants – tend to integrate in the western region and bear their children there.[7] This is what research of Kröhnert and Klingholz (2007, 56-62) as well as Kubis and Schneider (2007) establish. So severe is the permanent loss of young females from Germany's eastern region that this region is estimated to hold the lowest percentage of females within years of child-bearing age relative to their male counterparts than any place in Europe outside of mining camps in Scandinavia. This reality challenges two assumptions integral to the B-S convergence hypothesis: namely that there exists a fixed relation between labor force and population, and that population growth is exogenous. Time series data suggest these assumptions far removed from the observable reality.

A host of studies strongly suggest that these sorts of demographic changes attributable to regional inequality – that includes higher rates of persistent unemployment plaguing Germany's eastern region – should generate additional cumulative effects. Studies from Deutsche Bank Research (2004), Ludwig (2007), Ragnitz and Schneider (2007), as well as Uhlig (2006) project declines in numbers of future labor market entrants in the eastern region, portending future declines in levels of regional output. Research by Heilemann (2005) suggests additional cumulative

Table 3. Population Dynamics In Germany's Regions By Components (x 1000)

	Eastern Region x 1000			Western Region x 1000		
Year	Population	Births over Deaths	Net Migration*	Population	Births over Deaths	Net Migration*
1991	14,632	-89.61	-172.34	65,352	8.38	165.390
1992	14,442	-96.64	-93.41	66,152	20.31	90.337
1993	14,348	-100.18	-52.90	66,832	1.36	55.579
1994	14,262	-98.14	-25.46	67,160	-16.92	34.494
1995	14,204	-91.06	-19.12	67,457	-28.31	31.892
1996	14,152	-78.48	-16.60	67,744	-8.35	24.929
1997	14,112	-65.67	25.07	67,940	17.46	28.202
1998	14,051	-60.13	-20.81	67,978	-7.22	46.265
1999	13,981	-53.68	-38.24	68,105	-21.09	58.134
2000	13,900	-49.01	-62.95	68,288	-22.79	75.951
2001	13,788	-49.41	-90.75	68,551	-44.66	97.565
2002	13,671	-53.73	-75.71	68,811	-68.70	80.827
2003	13,566	-54.47	-50.66	68,954	-92.76	58.352
2004	13,477	-46.70	-44.40	60,024	-65.95	51.675
2005	13,387	-50.61	-42.76	69,078	-93.83	48.976
2006	13,293	-50.21	-56.64	69,078	-93.83	54.144

*Net migration covers the intra-German migration only. Differences between out-migration from the eastern region and immigration to the western region are related to statistical confusions arising from Berlin's having both eastern and a western city districts.

Source: Statistisches Landesamt Baden-Württemburg. *Volkswirtschaftliche Gesamtrechnungen der Länder (VGR) [Labor Statistics, National Accounts of States].* Stuttgart, Germany. April, 2008.

effects challenging interregional convergence, arising relative to massive losses of the eastern region's human capital.

In sum, the eastern region's well qualified, young adults have and continue to emigrate so as to avoid having to live and attempt to find and hold on to jobs and develop careers in a region experiencing levels of persistent unemployment significantly higher than are found in the western region. In addition, the median age of the eastern population registers as older than the western region's, and the eastern region is predicted to face a long-term deficit in labor market entrants. This population problem could be noted as a non-economic, demographic variable, but that is, according to Ludwig (2007, 210-218), also forecasted to generate additional cumulative effects for the regional economy over a very long run.

What is curious to note is that as population declines in Germany's eastern region relative to output, we observe the illusion of regional per capita output growth. In the time period 2001 through 2007, slightly more than 39% of the eastern region's per capita output growth appears as an illusion related to a decline in the population denominator relative to the output nominator (see Table 4).

Conclusion

This inquiry has sought to demonstrate with empirical evidence how developments in Germany's eastern region defy predictions for a *meliorative* trend that is supposed to lead toward a steady catching up and culminating with a convergence in per capita output with the western region over time. Our goal has been to apply a Veblenian critique in an effort to demonstrate the vacuous character of the convergence hypothesis and the neoclassical method with its penchant for purporting and relying uncritically on the use of laws. We have also introduced Myrdal's open system approach for understanding interregional dynamics in Germany, an approach that fits nicely under Veblen's philosophical and theoretical umbrella. Our research conclusions suggest the absence of any identifiable *meliorative* trend generated by "diminishing returns" when applied to capital, or any other processes or laws. On the other hand, we have noted policies leading to declines in rates of investment as well as monetary union and a privatization program. These two latter sets of policies were introduced as integral to the reunification program, and in a Veblenian sense, as "conscious ends of [some of] the individual members of the community" (Veblen 1900, 242): with effects initiating and then reinforcing persistence of inequality between Germanys two pronounced regions.

What still needs to be considered is that Thorstein Veblen recognized shortcomings in the neoclassical project and its attendant and underlying method shortly after this school of thought emerged and took a coherent and consistent form. In spite of its key shortcomings the neoclassical project — with its attendant method and a related belief in the validity of its laws — continues to dominate our Economics profession. And, its dominance is evinced in many ways, including a wide-spread acceptance of the B-S convergence hypothesis, as well as a related "uncritical conviction" that there is indeed a *meliorative* trend widely believed to automatically

Table 4. Regional Output Per Capita In Eastern Germany (Measured in Constant Prices Over Previous Year) (1991 through 2007)

Year	GDP €b	Population x 1000	GDP/Cap. in €	Growth Rate in %	Population Effect
1991	142.7	14,632	9,751	---	---
1992	158.5	14,442	10,974	12.5	11.6
1993	178.5	14,348	12,439	13.3	5.6
1994	200.2	14,262	14,039	12.9	5.3
1995	212.9	14,204	14,992	6.8	6.4
1996	219.0	14,152	15,474	3.2	11.6
1997	223.1	14,112	15,808	2.2	13.4
1998	224.8	14,051	15,997	1.2	36.6
1999	231.2	13,981	16,534	3.4	15.3
2000	234.6	13,900	16,878	2.1	28.7
2001	236.8	13,788	17,175	1.8	46.2
2002	239.6	13,671	17,523	2.0	42.9
2003	241.2	13,566	17,780	1.5	53.1
2004	244.4	13,477	18,136	2.0	33.4
2005	245.0	13,387	18,300	0.9	74.7
2006	250.3	13,293	18,828	2.9	24.9
2007	255.9	13,192	19,398	3.0	25.9

OUTMIGRATION EFFECTS FOR SELECTED TIME PERIODS

(BASED ON ANNUAL AVERAGES FOR SELECTED TIME PERIODS)

Period	Effect
1991-1997	19.8
1997-2000	23.8
2001-2007	39.2

Sources: Statistisches Landesamt Baden-Württemburg. *Volkswirtschaftliche Gesamtrechnungen der Länder (VGR), (National Accounts of States)*, Stuttgart, Germany, 2008; Calculations of Authors.

lead poorer regions, states, and countries toward auspicious outcomes, namely per capita output convergence over time.

Notes

1. We have dealt with some aspects of this subject in a shorter inquiry: "Gunnar Myrdal and the Persistence of Germany's Regional Inequality," appearing in the *Journal of Economic Issues*, 2009.
2. The neoclassical school of thought, like any school of thought, includes an underlying method. The neoclassical method is inherently deductive and ever so visible in Alfred Marshall's *Principles of Economics* ([1890] 1920). Marshall, like most mainstream economists following him, starts from premises that are introduced. When laws are applied expected results are generated. Then, data sets are selected with patterns and trends that support these laws. This deductive approach is still readily observable in standard Microeconomic texts more than 120 years after the initial publication of Marshall's *Principles*. The neoclassical method is likewise universalist. That is, the set of laws – supported by data conveniently presented to support said laws – is applied broadly across historical time and geographical place.

   In contrast, the Institutionalist method is inherently abductive and substantive. Abductive logic offers a metaphorical form of reasoning. That is, abduction takes observed events and seeks to infer an explanation based on comparison to analogous phenomena (Dyer 1988). A paradigmatic example is Veblen's use of biological evolution as a metaphor for describing institutional and social change. Instead of seeking universal laws, Institutionalists are wont to uncover the reality of the substance of society. Hence, their school is aptly classified as substantive. This means that historical, sociological, political, and cultural variables remain of central concern to the Institutionalists.

   In this way we see a stark contrast between Neoclassical and Institutionalist traditions. The neoclassical method takes assumed universal laws and seeks to show how reality conforms to them. The Institutional method, on the other hand, takes some part of the substance of social existence and seeks to explain it by considering connections with other relevant aspects of social existence.
3. Alfred Marshall is duly credited for introducing a coherent body of theory that also became elevated to a "classical situation." This is what Joseph Schumpeter stresses in his famous tome *History of Economic Analysis* [1954]. In many respects Marshall's body of theory and methodological approach remains the dominant paradigm today. Interesting to note is that Marshall ([1890] 1920, 151) traces back to the *Old Testament* of the *Hebraic Bible* "this tendency for a diminishing return as the cause of Abraham departing from Lot and most of the migrations of which history tells." Marshall ([1890] 1920, 151) quotes the Old Testament:

   > The land was not able to bear them, that they might dwell together for their subsistence was great, so that the could not dwell together. (*Genesis* 8:6)

   George Stigler ([1941] 1968) also notes the biblical origins of diminishing returns, a concept or principle that centuries later was expressed by Jacque Turgot and David Ricardo (Blaug 1986, 254-255; 199-203) to explain observations found in agricultural production. Later, in the second half of the nineteenth century, the concept of diminishing returns was creatively applied by Carl Menger and W. Stanley Jevons in their respective contributions, *Principles of Economics* ([1871] (1981) and *The Theory of Political Economy* ([1871] 1957), in efforts to explain consumer behavior. With publication of his *Principles of Economics* ([1890] 1920), Marshall elevated the concept of diminishing returns to the level of a law, namely the "Law of Diminishing Returns," while also supporting its broad if not universal applicability. In their understanding of dynamic interactions between regions, states, and countries Barro and Sala-i-Martin adopt this law as their central assumption without a critical assessment, what could be described as an integral dimension of their use and application of the neoclassical method.
4. Toward the end of WWII this geographic area was defined by the victorious Allies as the Soviet Occupation Zone. In 1949 this zone transformed to become a nation-state known as the German Democratic Republic (GDR). Since reunification in 1990, what was a nation-state has been redefined as a region composed of five newly created federal states. These five states composing Germany's eastern region are caught up in a transition from a planned to a market economy, and simultaneously with a reunification with the higher per capita output region of the former West Germany.

5. In later publications Barro (1996; 2002) seeks to explain why some developments failed to go according to his 1991 study, and why some other developments went even better than forecasted. In the interests of clarity in exposition, this inquiry limits itself to the original 1991 predictions for per capita output convergence between Germany's eastern and western regions.
6. Beta (β) convergence occurs through a reduction and closing in the gap of per capita output between regions over time. Sigma (σ) convergence involves a closing in the gap in cross sectional dispersion of per capita output over time (B-S 1991, 112).
7. Data reporting this interregional migration and relocation proves highly accurate as in Germany, when departing a residence in a region, one is obliged to visit their local city hall and fill out an *Abmeldungsformular*, noting one's departure. Then, there is an *Anmeldungsformular* to fill out upon relocating, typically to a city or town in the western region.

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