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Harmonizing Social Welfare and Economic Growth: Case Studies of European Countries and Implications for Korea

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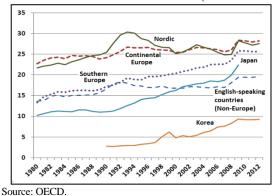
The Debt Crisis and Debate on Welfare Spending

The debt crisis that afflicted several European countries has created a controversy regarding welfare policy in Korea, which has managed to achieve a relatively sound fiscal position. With welfare spending continuing to garner a bigger chunk of the national budget as illustrated in <Figure 1>, this has become a key economic issue attracting much public attention. Fiscal conservatives call for tighter controls on

welfare spending, because once spending starts growing, it tends to become hard to reduce and reverse.

On the other hand, some are calling for greater welfare spending in order to temper the effects of economic polarization, social unrest, unemployment and an aging population. In this context, this paper aims to examine the relationship between welfare spending and economic growth and propose a direction for welfare policy which can actually contribute to economic growth.

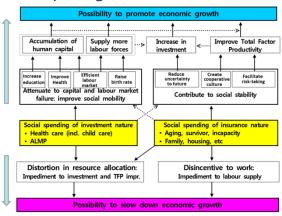
Figure 1. Changes in Welfare Spending (Unit: % of GDP)



Relation between Economic Growth and Welfare Spending

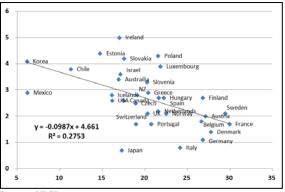
Discussion over the proper size of welfare spending is based on the argument that large governments tend to be inefficient. It is often said that large government distorts resource allocation and economic activities, not to mention that big welfare spending decreases incentives to work, leading to chronic low growth and high unemployment. However, there are also opinions that cite the positive effects of welfare spending on economic growth. First, welfare spending can make up for capital and labor market failure. As income inequality may inhibit investment in human and physical capital, redistribution policies can remedy this capital market failure and promote growth. Second, welfare spending can contribute to social integration, allowing for stable growth. Widening income gaps aggravate discord and conflict between classes, becoming a factor for social unrest that leads to a negative impact on economic growth. <Figure 2> illustrates the different channels through which increasing welfare spending can influence economic growth in both positive and negative ways. Important tasks for policy makers are to create a mechanism in which welfare policy supports sustainable economic growth, while minimizing a distortion effect stemming from excessive public intervention.

Figure 2. Different Channels from Welfare Spending to Economic Growth



According to various empirical studies, there is generally a negative correlation between government spending (or welfare spending) and economic growth rates, although the correlation has not been fully confirmed. It is relatively easy to prove a correlation, as shown in <Figure 3>, while it may be very difficult to find causality.

Figure 3. Correlation between Government/Welfare Spending and Economic Growth



Source: OECD.

Against these arguments and previous studies, this paper reviews the correlation between government spending and economic growth rates, and finds a number of variables that may affect the correlation. Many studies, as summarized in <Table 1>, have pointed out a negative correlation between big government spending or large welfare spending and economic growth rates.

Table 1. Empirical Studies Reporting a Negative Correlation between Economic Growth and Welfare Spending

Research	Independent Variable	Countries / Periods
Landau (1983)	Public spending	48 countries / 1961-76
Marlow (1986)	General government spending and welfare spending (including level and increase rate)	19 countries / 1960-80
Barro and Sala-i- Martin (1995)	General government spending	90 industrial countries worldwide
Borcherding et al. (2001)	Government consumption expenditure	20 OECD countries / 1970-97 (panel data)
Heiter (2001)	Total government spending	21 OECD countries / 1996-2000 (panel data)
Föster and Henrekson (2001)	General government income and spending	22~29 developed countries / 1970–95
Dar and AmirKhalkhali (2002)	General government spending	19 OECD Countries / 1971–99
Afonso and Furceri (2010)	General government income and spending	28 OECD Countries and EU member states / 1970– 2004
Bergh and Karlsson (2010)	General government income and spending	24–27 OECD Countries / 1970–1995, 1970–2005

However, the impact of welfare spending on economic growth rates varies depending on its characteristics. In order to examine the impact of welfare spending (proxied by government spending share compared to GDP), we conducted an empirical analysis based on the equations below. In the model, X_k represents different explicatory variables which exert influence on growth rate. The model has six categories of explicatory variables, as follows. 1) Government spending variables (government spending and eight kinds of social spending defined by the OECD), 2) Macro-policy variables, 3) Industrial structure variables, 4) Education and R&D investment variables, 5) Governance variables and 6) Legal origins. Most of explicatory variables have one year time lag with regard to dependent variable, because it is highly likely for welfare spending to take some time before affecting GDP. The details of the variables are described in the annex with emprical results.

$$Y_{it} = \alpha + \sum_{k=1}^{k} \beta_{kit-1} X_k + \mu_{it}, (\mu_{it} = \mu_i + \epsilon_{it})$$

We found that there exists a negative correlation between economic growth and government size (welfare spending). However, countries with higher education and R&D spending displayed high economic growth rates despite large welfare spending as a percentage of GDP. A high level of investment in human capital and R&D can offset, to some extent, economic inefficiency deriving from big government spending. This finding can be interpreted as investment in human capital and productivity increase having a strong impact on growth rates in the long run.

Assessment of the European Social Model

Even though there has been much research on the classification of European welfare models or regimes, Esping-Andersen (1990)'s tripartie-regimes is the most significant amongst them. He argues that European welfare models consist of Liberal (the Anglo-Saxon), Conservative (Continental) and Social Democratic (Nordic) models according to decommodification and social stratification. However, some experts and researchers, in particular Ferrera (1996) and Sapir (2005), put weight on the distinctive importance of the Southern European model, which is different from the Continental model. As a result, our research makes use of four European welfare models: the Anglo-Saxon, the Continental, the Nordic and the Southern European.

The Nordic model is well known for its high level of social expenditure based on citizenship rather than on contribution. In this model, the role of government is more important than that of the market. Also, the Nordic model tries to enhance the linkage between work and welfare through active labor market policies. On the other hand, the Anglo-Saxon model

regards welfare not as a social right but as distribution, focusing on low-income households as social assistance based on meanstesting. Therefore, the requirements for beneficiaries are very strict even though the level of welfare is not higher than that of other welfare models. In the case of the Continental model, it reflects key features of both the Nordic model and the Anglo-Saxon model. While the Continental model contends that the role of the government is more important as in the case of the Nordic model, it sets up complex pension systems that reflect occupation, resulting in wider economic polarization. Lastly, the family-centered Southern European model is known for its high level of employment protection. And cash benefits are more important than other methods. However, as many experts point out, the structural problems of the Southern European model have to be addressed with respect to welfare sustainability.

Upon analyzing the European welfare models by the OECD Social Expenditure Database (1994~2007), we were able to find an array of results. First, improvements in income inequality and poverty rates are more effective in the Nordic model than in the other three European models. Second, welfare sustainability is even higher in the Nordic model and the Anglo-Saxon model in terms of efficiency. Lastly, the Southern European model can be estimated to be less effective than any other European welfare model. However, there are some critiques on the classification of European welfare models. For instance, countries classified within the European welfare models display disparate performances and features. This is the reason why case studies on major countries' welfare systems are necessary.

Country Cases

For a more detailed analysis, we selected four European countries, Denmark, Sweden, Germany and the Netherlands, which are regarded as successful cases of welfare reform in the period since the 1990s.

In the case of Denmark, the Danish government has focused on improving labor participation to account for the mid and long-term demographic changes (i.e. population aging) and strengthen the sustainability of the Danish welfare system since the 1990s. In this context, some examples include raising the retirement age to 67 for receipt of pensions and reforming voluntary early retirement pension (VERP) that delays retirement age, providing more incentives to work.

In the meantime, welfare reforms in Sweden have been initiated as a response to the negative business cycle shock and sequential crises in its welfare system. While Swedish public spending is under the control of strong fiscal regulations, the Swedish government has tried to make for a more predictable and sustainable welfare system. For instance, since the pension reform in 1998, it is now possible to reflect real wage, inflation rate, economic growth, and life expectancy in the calculation of the amount of pension entitlements, improving the overall sustainability of the Swedish pension system.

In Germany, the "Hartz reform" in 2003-2005 formed the foundation of the current German welfare system, focusing on the promotion of employment and the flexibility of the labor market. This brought about new forms of labor such as dispatch working and mini-jobs. Moreover, education and financial assistance is provided to encourage the elderly and women to actively participate in the labor market. Especially, in order to cope

with the aging society, the age level of persons benefiting from the pension system has been raised. In the German welfare system, all policies acknowledge that welfare and growth influence each other.

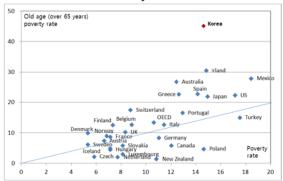
The Netherlands has long been the model of a traditional and generous welfare state in Europe. After the Wassenaar Agreement in 1982, the Dutch welfare system has developed a tendency to focus on lightening the tax burden in public expenditure, tightening control over wage increase, and reducing the level of social security by practicing flexicurity. In order to maintain female and elderly citizens within the labor market, various policies were implemented. Upward adjustment of the retirement age occurred within the same context. However, after the global financial crisis and European financial crisis, the Dutch government is seeking methods to secure financial stability by efficient allocation of welfare as well as increasing productivity by invigorating the labor market.

Policy Implications

Welfare state models face numerous challenges. Many developed countries in Europe are experiencing worsening fiscal sustainability with narrow room for economic stimulus, and more sluggish economic growth. Austerity measures were put in place to recover fiscal stability, but making cuts in large spending budgets has proven difficult and painstaking. Raising tax rates, which represents an alternative, is difficult for the possibility of its negative impact on economic activity.

Situations in Korea are quite different from what European countries face now and it is difficult to apply European examples directly to Korean context. It is noteworthy to point out what Korea is confronted with. First, economic inequalities have been increasing. Korea had been successful in achieving high GDP growth rate, while keep its economic inequality level low till the financial crisis in late 1990s. Despite of weak level of welfare spending compared to developed countries, fast economic growth allowed to increase employment and consequent good performances to reduce poverty problem in Korea. However, the structural adjustment including lay-off and increasing flexibility in labor market produced unwanted side effects such as unemployment rise and increasing share of temporary workers. Second, Korea has been facing the problem of low fertility rate. Korea's fertility rate went down under 2.1 (called replacement rate) in 1983, and recorded 1.15 in 2009, which is the lowest level among OECD countries. Besides, its population has been rapidly aging. Korea old age population reached 7% in 2000 and is expected to reach 14% in 2018 and 20% in 2026. Increasing old age population causes poverty problem particularly in Korean context in which social welfare system is not well established. Korea's old age poverty rate is 30% point higher than OECD average, while general poverty rate is 4% point higher as shown in <Figure 4>. However, the structural adjustment including lay-off and increasing flexibility in labor market had side effects such as unemployment rise and increasing share of temporary workers in Korea's total employment.

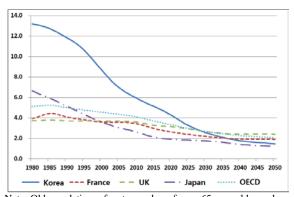
Figure 4. Overall Poverty Rate and Old Age Poverty Rate



Source: OECD.

Given record-low birth rates and the aging population, as shown in <Figure 5>, it is likely that Korea will be obliged to spend more on welfare policy. The important question is how to create a sustainable welfare model which reflects Korea's particular economic and social development.

Figure 5. Prospect for Number of Working Population Compared to the +65 Population



Note: Old population refers to number of over 65 year-old popula-

tion.

Source: OECD.

We can find some implications from the above cases for the future direction of Korea's welfare policy. First, it is necessary to maximize existing welfare policy, but also develop ways to raise taxes in a growth-friendly manner. Also, in the coming years, it is necessary to decide on the time for increasing tax rates. Second, we have to create an atmosphere conducive to policy innovation. Given that high tax rates, an essential feature of welfare regimes, may place a burden on business activities and employment, it would be necessary to ease unnecessary regulations and reform the business environment in order to encourage economic activity. Third, we must establish growth-oriented welfare regimes with a special focus on strengthening human capital and employment rates. KIEP

Appendix

Variable Details

Item		Variable		Variable name	Note	Source	
Dependent variable		GDP per capita		GDPPER	US dollar	OECD	
		Government spending		GOV_EXP		OECD	
			Elderly	SS_Old_Age			
			Bereaved	SS_Survivors			
	١ .	Welfare	Handicapped SS_INCAPACITY				
	Government		Health care	SS_Health			
	spending		Family	SS_Family	in % of GDP	OECD SOCX	
	(in % of GDP)	Spending	Unemploy- ment	SS_Unemploy-ment		SOCX	
			ALMP	SS_ALMP			
			Housing	SS_Housing			
			Other	SS_Other			
	Macro-	Inflation		Inflation_rate	%	Oxford	
	economic	Unemployment rate		unemploy_rate	%	Oxford	
	policy	Labor participation		Lab_Part	%	OECD	
Explanatory variable	Industrial structure	Openness		Openess	(trade/GDP)x100	OECD	
		Manufacture ratio		Manu_share	As % of gross value added production		
	Human capital / R&D investment	Education		Education_GDP			
		R&D investment		RD_GDP	in % of GDP	OECD, Eurostat	
	Governance	Labor freedom		EF_labor_free- dom	0~10 (in ascending order)	Heritage	
		Investment freedom		EF_investment	0~10 (in ascending order)		
		freedom from corruption		EF_from_corrup-tion	0~10 (in ascending order)	Foundation	
		Business freedom		EF_business_free-dom	0~10 (in ascending order)		
		Anglo-Saxon		Common	dummy variable		
		French		French	dummy variable		
	Legal origin	German		German	dummy variable	Klerman et al. (2009)	
		Scandinavian		Scan	dummy variable] (2005)	
		Socialist		Social	dummy variable]	

Empirical Model used

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\begin{split} &\ln GDPPER = c_0 + c_1 GOVexp_{t-1} + c_2 old \ age_{t-1} + c_3 survivors_{t-1} + c_4 \\ &+ c_5 health_{t-1} + c_6 family_{t-1} + c_7 unemployment_{t-1} + c_8 ALMP_{t-1} + c_9 Housing_{t-1} \\ &+ c_{10} Other_{t-1} + c_{11} \\ &+ c_{10} Other_{t-1} + c_{15} Manufacture \ share_{t-1} + c_{16} education_{t-1} + c_{17} RD_{t-1} \\ &+ c_{18} labour free + c_{19} invest free + c_{20} corruption free + c_{21} business free + c_{22} law + \mu \end{split}
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Empirical Analysis Result of <Model 1> (Dependent Variable: In(GDPPER_{it}))

Types of welfare spending	① Elderly	② Bereaved	③ Family	④ Handicapped	©Unemploymen t	Health care	① ALMP	® Others
С	10.70*** (0.35)	10.64 (0.36)	11.98 0.38	10.75 0.39	10.75*** (0.39)	10.64*** (0.35)	10.56*** (0.36)	11.32*** (0.33)
GOV_EXP	-0.01** (0.00)	-0.01*** (0.00)	-0.02*** (0.00)	-0.01*** (0.00)	-0.01** (0.00)	-0.02*** (0.00)	0.00 (0.00)	-0.01*** (0.00)
SS_OLD_AGE	0.01 (0.02)							
SS_SURVIVORS		0.04 (0.05)						
SS_FAMILY			0.29 (0.04)					
SS_INCAPACITY				0.01*** (0.03)				
SS_UNEMPLOYMENT					-0.05 (0.04)			
SS_HEALTH						0.09*** (0.03)		
SS_ALMP							-0.25*** (0.08)	
SS_OTHER								-0.63*** (0.05)
OPENESS	-0.01*** (0.00)	-0.01*** (0.00)	-0.01*** (0.00)	-0.01*** (0.00)	-0.01*** (0.00)	-0.01*** (0.00)	-0.01*** (0.00)	0.00*** (0.00)
UNEMPLOY_RATE	-0.03*** (0.01)	-0.03*** (0.01)	-0.02*** (0.01)	-0.03*** (0.01)	-0.03*** (0.01)	-0.02*** (0.01)	-0.03*** (0.01)	-0.02*** (0.01)
INFLATION_RATE	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
LAB_PART	-0.02*** (0.00)	-0.02*** (0.00)	-0.03*** (0.00)	-0.02*** (0.01)	-0.02*** (0.00)	-0.02*** (0.00)	-0.02*** (0.00)	-0.03*** (0.00)
EDUCATION_GDP	0.15*** (0.03)	0.15*** (0.03)	0.10*** (0.03)	0.14*** (0.03)	0.15*** (0.03)	0.17*** (0.03)	0.13*** (0.03)	0.18*** (0.03)
RD_GDP	0.07** (0.03)	0.07** (0.03)	0.08** (0.03)	0.07** (0.03)	0.07* (0.04)	0.06* (0.03)	0.08** (0.03)	0.19*** (0.03)
MANU_SHARE	0.04*** (0.00)	0.04*** (0.00)	0.04*** (0.00)	0.04*** (0.00)	0.05*** (0.00)	0.04*** (0.00)	0.05*** (0.00)	0.04*** (0.00)
Observations	454	454	454	454	447	457	459	449
R-squared	0.28	0.28	0.36	0.28	0.28	0.30	0.30	0.46
S.E. of regression	0.58	0.58	0.55	0.58	0.58	0.57	0.57	0.51
Sum squared resid	149.35	149.25	133.12	149.44	149.07	146.77	146.17	112.59
Durbin-Watson stat	2.15	2.13	2.23	2.15	2.15	2.19	2.16	2.15
Akaike info criterion	1.77	1.77	1.66	1.77	1.78	1.75	1.74	1.50
Schwarz criterion	1.86	1.86	1.75	1.86	1.88	1.84	1.83	1.59
F-statistic	19.49	19.53	27.88	19.45	18.86	21.17	21.70	40.95
Prob(F-statistic)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note: ***, **, * each means 1%, 5%, 10% of statistical significance respectively. Parenthesis shows standard error.

Empirical Analysis Result of <Model 2> (Dependent Variable: In(GDPPER_{it}))

Types of welfare spending	 El derly 	② Housing	③ Family	④ Handicapped	③Unemploymen t	Health care	⊙ ALMP	Others
С	7.48*** (0.50)	7.44*** (0.52)	8.44*** (0.50)	7.40*** (0.50)	7.11*** (0.55)	7.47*** (0.48)	7.27*** (0.48)	8.63*** (0.37)
GOV_EXP	-0.01** (0.01)	-0.01** (0.00)	-0.01*** (0.00)	-0.01* (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	-0.01*** (0.00
SS_OLD_AGE	0.01 (0.02)							
SS_HOUSING		0.16* (0.09)						
SS_FAMILY			0.17*** (0.04)					
SS_INCAPACITY				-0.05 (0.04)				
SS_UNEMPLOYMENT					-0.11** (0.05)			
SS_HEALTH						-0.08** (0.03)		
SS_ALMP							-0.28*** (0.10)	
SS_OTHER								-0.56*** (0.05)
OPENESS	0.00*** (0.00)	0.00*** (0.00)	-0.01*** (0.00)	0.00** (0.00)	0.00** (0.00)	0.00*** (0.00)	0.00*** (0.00)	0.00*** (0.00)
UNEMPLOY_RATE	0.01 (0.01)	0.02 (0.01)	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)	0.00 (0.01)
INFLATION_RATE	0.02** (0.01)	0.03* (0.01)	0.02* (0.01)	0.02* (0.01)	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)	0.02** (0.01)
LAB_PART	0.01* (0.01)	0.01 (0.01)	0.00 (0.01)	0.01* (0.01)	0.01* (0.01)	0.01*** (0.01)	0.01** (0.00)	0.00 (0.00)
EDUCATION_GDP	0.03 (0.03)	0.04 (0.04)	0.01 (0.03)	0.04 (0.03)	0.02 (0.04)	-0.01 (0.04)	0.02 (0.03)	0.03 (0.03)
RD_GDP	0.08** (0.03)	0.06 (0.04)	0.08*** (0.03)	0.08** (0.03)	0.08** (0.03)	0.07** (0.03)	0.08*** (0.03)	0.19*** (0.03)
MANU_SHARE	0.02*** (0.01)	0.02*** (0.01)	0.02*** (0.00)	0.02*** (0.00)	0.02*** (0.01)	0.02*** (0.00)	0.02*** (0.00)	0.01*** (0.00)
EF_LABOR	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
EF_INVESTMENT	0.00* (0.00)	-0.01*** (0.00)	-0.01** (0.00)	-0.01** (0.00)	0.00 (0.00)	-0.01** (0.00)	0.00 (0.00)	0.00 (0.00)
EF_CORRUPTION	0.02*** (0.00)	0.02*** (0.00)	0.02*** (0.00)	0.02*** (0.00)	0.02*** (0.00)	0.02*** (0.00)	0.02*** (0.00)	0.03*** (0.00)
<u>EF_</u> BUSINESS	0.01** (0.00)	0.01*** (0.00)	0.01*** (0.00)	0.01** (0.00)	0.01*** (0.00)	0.01*** (0.00)	0.01** (0.00)	0.00 (0.00)
Observations	169	149	170	170	164	169	170	164
R-squared	0.75	0.76	0.77	0.75	0.75	0.75	0.76	0.87
S.E. of regression	0.34	0.33	0.32	0.33	0.34	0.33	0.33	0.25
Sum squared resid	17.56	14.49	15.77	17.45	17.00	16.91	16.73	9.14
Durbin-Watson stat	2.16	2.30	2.30	2.23	2.36	2.15	2.42	1.74
Akaike info criterion	0.74	0.70	0.63	0.73	0.74	0.70	0.68	0.12
Schwarz criterion	1.00	0.98	0.88	0.98	1.01	0.96	0.94	0.39

Empirical Analysis Result of <Model 3> (Dependent Variable: In(GDPPER_{it}))

Types of welfare spending	① Elderly	② Bereaved	3 Housing	4 Family	⑤ Handicapped	©Unemploymen t	⑦ ALMP	® Others
С	10.57*** (0.28)	10.54*** (0.28)	9.99*** (0.30)	11.80*** (0.29)	10.78*** (0.30)	10.62*** (0.31)	10.64*** (0.28)	11.10*** (0.25)
GOV_EXP	-0.02*** (0.00)	-0.02*** (0.00)	-0.01*** (0.00)	-0.02*** (0.00)	-0.02*** (0.00)	-0.01*** (0.00)	-0.02*** (0.00)	-0.02*** (0.00)
SS_OLD_AGE	0.03** (0.01)							
SS_SURVIVORS		0.07 (0.04)						
SS_HOUSING			0.27*** (0.06)					
SS_FAMILY				0.26 (0.03)				
SS_INCAPACITY					0.02 (0.03)			
SS_UNEMPLOYMENT						-0.03 (0.04)		
SS_ALMP							-0.01 (0.06)	
SS_OTHER								-0.52*** (0.04)
OPENESS	0.00*** (0.00)	0.00*** (0.00)	0.00*** (0.00)	-0.01*** (0.00)	0.00*** (0.00)	0.00*** (0.00)	0.00*** (0.00)	0.00*** (0.00)
UNEMPLOY_RATE	-0.01** (0.01)	-0.01* (0.01)	0.00 (0.01)	-0.01* (0.01)	-0.01** (0.01)	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)
INFLATION_RATE	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
LAB_PART	-0.02*** (0.00)	-0.01*** (0.00)	-0.01** (0.00)	-0.03*** (0.00)	-0.02*** (0.00)	-0.02*** (0.00)	-0.02*** (0.00)	-0.02*** (0.00)
EDUCATION_GDP	0.19*** (0.02)	0.19*** (0.03)	0.13*** (0.02)	0.13*** (0.02)	0.17*** (0.02)	0.17*** (0.03)	0.18 (0.02)	0.19*** (0.02)
RD_GDP	0.06* (0.03)	0.06** (0.03)	0.04 (0.03)	0.04 (0.03)	0.05 (0.03)	0.05 (0.03)	0.05 (0.03)	0.17*** (0.03)
MANU_SHARE	0.02*** (0.00)	0.02*** (0.00)	0.02*** (0.00)	0.02*** (0.00)	0.02*** (0.00)	0.02*** (0.00)	0.02*** (0.00)	0.02*** (0.00)
COMMON	0.18*** (0.07)	0.15** (0.06)	0.09 (0.06)	0.10** (0.06)	0.12* (0.06)	0.13* (0.07)	0.13** (0.06)	0.27*** (0.05)
GERMAN	0.36*** (0.07)	0.39*** (0.07)	0.59*** (0.07)	0.26*** (0.07)	0.38*** (0.07)	0.38*** (0.07)	0.39*** (0.07)	0.26*** (0.06)
SCAN	0.75*** (0.07)	0.78*** (0.08)	0.78*** (0.07)	0.64*** (0.07)	0.73*** (0.07)	0.74*** (0.08)	0.75*** (0.07)	0.68*** (0.06)
SOCIAL	-0.60*** (0.07)	-0.56*** (0.08)	-0.53*** (0.07)	-0.68*** (0.07)	-0.60*** (0.07)	-0.60*** (0.08)	-0.60*** (0.08)	-0.49*** (0.07)
Observations	454	454	405	454	454	447	459	449
R-squared	0.60	0.59	0.66	0.65	0.59	0.59	0.59	0.69
S.E. of regression	0.44	0.44	0.40	0.41	0.44	0.44	0.44	0.38
Sum squared resid	84.19	84.49	62.61	73.04	85.06	85.07	85.12	63.54
<u>Durbin</u> -Watson stat	2.26	2.23	2.05	2.27	2.21	2.32	2.28	2.24
Akaike info	1.21	1.22	1.04	1.07	1.22	1.24	1.21	0.95