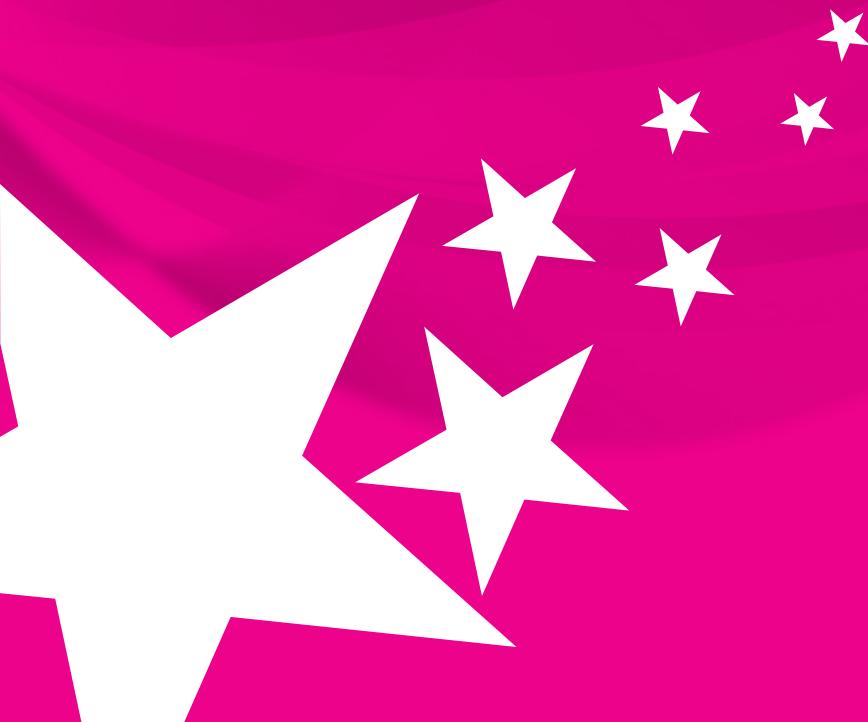




# CATCHING UP AND DETERMINANTS OF SERVICES GROWTH IN NEW MEMBER STATES

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Ljubljana, 2010

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## 1. INTRODUCTION<sup>1</sup>

Since the launching of transition reforms, the Central and Eastern European Countries (CEECs) have seen a radical structural transformation and institutional changes that have been reflected in the shifts of output and employment in favour of services. Even though dynamics and patterns of these shifts vary among countries, depending on both, the different backgrounds and the speed and nature of transition reforms, the services sector has acquired a dominant position in all New Member States (NMS<sup>2</sup>) and has been catching up with the EU15. The discussion of the dimensions of the structural change in the NMS has mostly concentrated on the process of shedding jobs in manufacturing and the related increase in the share of services employment. Much less attention has been paid to the patterns of employment transformation in two major categories of services (private/market services and public/non-market services<sup>3</sup>) and to the determinants of their growth during the transition. In the past, most services in CEECs were provided by the public (state) sector, whereas private suppliers hardly existed prior to the transition. With the change of political system and particularly with the introduction of market mechanisms, private suppliers of services in the CEECs experienced a rapid growth driven by privatization, liberalization and deregulation of the economy. Private services were explored more intensively owing to their poor development record in the past and the catalytic role in overall competitiveness of the economy. These services were at the focus of research also because they attracted the bulk of FDI inflows. Foreign direct investors in CEECs targeted those services that were at the infant stage of development, yet critical for smooth functioning of the economy (e.g. financial services, telecommunications, and business services).

On the contrary, the reform process was delayed in public services, as their relative share in total employment was already high at the outset of reforms; however,

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- 1 Part of this analysis is based on an article (Burger, Stare, 2010) whose final and definitive form has been published in 'The Services Industries Journal' (c), Vol. 30, No. 3/4, 2010 Copyright Taylor & Francis; The Services Industries Journal is available online at <http://www.informaworld.com/0264-2069>
  - 2 The term CEECs denotes ten former socialist economies that became the new EU members (NMS) in 2004 and 2007. Malta and Cyprus, who joined the EU in 2004, do not share the characteristics of the past socio-economic system with other NMS, but are included into the analysis in some chapters. Both acronyms, CEECs and NMS are used interchangeably throughout the text.
  - 3 See chapter 2.1 for definitional issues.

the quality and performance of those services is arguable. Nevertheless, public services were considered the building block of the socialist economies and perceived as a fundamental element of welfare and equality. During the transition, researchers and policy-makers seemed to be much less interested in exploring the role and the changed character of public services in a different socio-economic setting, although some early discussions on New Public Management could be observed in the CEECs, mostly as a reaction to public budget constraints. Only at a later stage of transition have the issues of public services transformation and adjustment to the new realities became more apparent, along with an increased demand for high-quality public services and improved efficiency in public services spending. Gradually, it became evident that both public and private services matter for a competitive economy, and that public services are not an isolated segment of market economy, but need to adjust to businesses, technology and society in terms of responsiveness, quality and efficiency. Moreover, some services are increasingly supplied by both private and public suppliers (mixed services). The use of various market mechanisms in the provision of public services and the need for collaboration with private sector is increasingly seen as instrumental for easing the pressure on public spending. Nevertheless, the growth patterns of private, public or mixed services were not examined in the NMS. The role of various determinants of services employment growth was studied extensively, based on the evidence of developed market economies where tertiarisation evolved as a gradual process reflecting the changes in demand (income growth) and supply (technological development). Much less is known, however, on the transformation of services sector and its drivers in the former socially-planned economies, where political, economic, social and institutional changes were very rapid in the last two decades and could have played a role.

The analysis attempts to contribute to closing the gap in the research of private and public services transformation during the transition and to unveil the distinguishing features of the two categories based on solid empirical underpinning.<sup>4</sup> The objectives of the analysis are twofold. Firstly, it examines the evolution of private and public services employment<sup>5</sup> in the NMS against the benchmark of market economies, catching up process and the convergence with

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4 Acknowledgement: The research was financed partly by the European Commission funds for FP7- ServPPIN project (The Contribution of public and private services to European growth and welfare and the role of public-private innovation networks) and partly by the Slovenian Research Agency (Research Programme on »Capabilities and Opportunities of Slovenia and its Actors within the Globalisation Processes», P5-0177).

5 In analysing structural changes over time and across countries, the use of employment indicators is preferred to value added indicators on account of poor availability of data sets at constant prices and volume indices. This is even more relevant for the transition economies characterised by high price distortions in the past and rapid changes in relative prices of services after the introduction of market reforms.

the EU15 patterns. The empirical analysis is complemented by an examination of differences between the new and the old EU member states as regards private services efficiency and public services performance. Secondly, the analysis aims to shed some light on the underlying reasons for the shift in employment towards services in the NMS, building on the standard explanatory factors as well as transition related determinants.

After the introductory remarks, the definitional issues of measuring private and public services employment are discussed. Further, we reflect upon the transformation of private and public services in the context of transition reforms in NMS. The third chapter of the analysis presents some stylized facts on services employment growth in the NMS during transition. This is followed by the convergence analysis of private and public services development in the NMS in the period 1995-2005; it is based on the EU15 benchmark and the GDP level benchmark for market economies with the aim to identify similarities and dissimilarities. Afterwards, we assess the structural transformation in the CEECs from a more qualitative perspective by exploring the progress in efficiency/performance of private and public services compared to the EU15 standards. Chapter four first briefly refers to the literature on the determinants of services employment growth, which sets the ground for an examination of factors contributing to the increase in services employment in NMS. After the description of methodological approach and variables, the regression analysis is applied on panel data for the period 1995-2007. We estimate the significance of different explanatory variables on employment growth for services in general and for service sub-groups. The results are discussed distinguishing between the impacts of standard determinants of services employment growth and transition-related factors referring to market reforms, institutional change and governance. Chapter five concludes by summarizing the main results with implications for policy shaping in the NMS, and by suggesting possible avenues of further research.



## 2. TRANSFORMATION OF SERVICES DURING TRANSITION

### 2.1 DEFINING SERVICE SUB-SECTORS

Even though the division between private and public services is commonly used in services research to distinguish between the heterogeneous services along one key criterion, such as the type of ownership of the services provider,<sup>6</sup> the dividing line is much less clear when it comes to the definition of private and public services for the purpose of empirical investigation.<sup>7</sup> In addition, the borderline between private and public services changes across countries, time and institutional settings. A further inadequacy of definition refers to the fact that public services are often equated with the public sector. While this may be a problem when public sector expenditures are concerned, as they are not related solely to the provision of the public services, it is much less of a problem when public services employment is analysed, since the employment in the public sector mainly refers to the provision of public services. In defining the scope of the public sector, different approaches are recognized. Gemmel claims that much of the theoretical and empirical literature has concentrated on the public expenditure approach, partly due to the ease of measurement and availability of data. He, however, suggests that it is perhaps most useful to define public sector with regard to economic activities, institutions or individuals which are controlled by the government. This does not refer only to ownership but to exercising legal control over areas of economic activity (e.g. regulation of education, consumer protection) without any legal ownership (Gemmel 1993: 3).

Taking into account new trends in public management, the involvement of private sector in the provision of public services and the proliferation of public-private partnerships in services provision, it is getting increasingly difficult to properly capture and measure the volume of public or private services. In view of the above measurement problems, our research of the public and private services employment relies on the use of proxy categories for which data are more readily available. Private services are approximated with the data for market services employment

6 Other major categorizations distinguish between intermediate and final consumption services, producer and household services, basic and non-basic services, etc. Further, disaggregated groups of services, such as for example the division between distributive, producer, social and personal services, are used in empirical analyses (Illeris 1996: 25–27).

7 On account of better data availability, private and public services are most often approximated by data for market and non-market services. Throughout the text we use the terms public/non-market services and private/market services interchangeably.

and public services with the data for non-market services employment.<sup>8</sup> It is assumed that market services are provided by private companies in a competitive environment with little public regulation and that the non-market services are produced by the state or by the public institutions, predominantly financed by public funds.<sup>9</sup> The reality is, however, much more complex and there are numerous hybrid situations differing in the extent to which market/non-market services are subject to state regulation. An argument in favour of such an approximation is that even though a number of non-market services are provided by private suppliers (e.g. in health, education), they still involve a high level of public expenditure and regulation.<sup>10</sup> This, however, does not imply that imperfections in measuring public and private services employment can be overlooked when interpreting the results.

Beside the contentious character of the definition, public services are fraught with measurement problems of output, which may not reflect real changes but statistical artefacts<sup>11</sup>. In fact, we tend to measure outputs by inputs into public services provision (e.g. number of employees or hours worked) while output relates to quality-adjusted volume indicators (for example pupil hours in education) for which methodologically comparable data are not yet available.<sup>12</sup> However, what is of ultimate importance in public services is the improvement of the outcome/ performance for final users of public services, which is much more difficult to measure (e.g. health improvement of a patient). Nevertheless, a number of indicators could be used to approximate the performance of public services and then compared across countries (see chapter 3, subchapter 3). The following chapter aims to throw light on the context of structural change, the importance of inherited and evolving new institutions in the transformation of private and public services in the CEECs.

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- 8 Using the NACE-Rev.1 classification of economic activities, market services include wholesale and retail trade (G), hotels and restaurants (H), transport, storage and communications (I), financial intermediation (J), real estate, renting and business activities (K), whereas non-market services include public administration and compulsory social security (L), education (M), health and social work (N), other community, social and personal services (O), private households with employed persons (P).
  - 9 Non-market services cover the services provided to the community as a whole free of charge or at a fee which is well below 50 percent of the production costs (OECD 2008).
  - 10 High level of regulation and substantial direct public involvement in the non-market services exist in all OECD countries.
  - 11 The most important issues of the efficiency measurement in the production of public services are: how to define output (output versus outcome); how to define aggregate output over a range of different products; how to incorporate exogenous conditions in the valuation of efficiency; lack of information on the market value of the output as public services are often provided to the user at no cost or at subsidized price. Efforts are being made at national and international level to improve the measurement of public sector output, including the improvement of price and volume measures of non-market services (EC 2004: 23).
  - 12 Eurostat - OECD Task Force on non-market services is investigating the use of output methods for comparisons of education and health services across countries. For details see draft OECD Handbook Measuring Education and Health Volume Output (OECD 2007).

## 2.2 THE FEATURES OF THE TERTIARISATION PROCESS IN THE CEECs

When launching political changes and market-oriented reforms, the CEECs at first experienced a severe decline in output and employment, which was followed by a rapid recovery. Since 1995, economic restructuring has proceeded hand in hand with productivity and technological catching-up. The adjustment process initiated by the implementation of market reforms brought about the shifts in employment structures. The most significant was huge downsizing in manufacturing, and even though services became the major generator of new employment, this was not sufficient to yield overall positive employment growth in the CEECs. The employment levels did not reach those of the beginning of the transformation in most CEECs.<sup>13</sup> Although the pace and scope of the tertiarisation varied considerably among the CEECs,<sup>14</sup> services attained a dominant share in employment in all countries, except Bulgaria and Romania by the end of the 1990s. Enhanced tertiarisation was partly also a result of reclassifications and externalisation of services previously undertaken in-house by large industrial conglomerates.<sup>15</sup> A number of scholars observe that the CEECs were characterised by excessive industrial employment compared to other countries at the similar income level, while the service sector was underdeveloped (Landesmann 2002; Mickiewicz 2001; Raiser, Schaffer and Schuchardt 2004; Rutkowski and Scarpetta 2005).

This was particularly the case of market services and was related to the very essence of patterns of economic growth in the former socio-economic system and its underlying implementation and management mechanisms. The division of labour in this context did not favour market relations and the consequent comprehensive system of linkages which characterize market economy. In the absence of market forces and market relations in highly centralised economy, the lack of entrepreneurship and innovation, as well as isolation from the external markets, there was no room for development of service activities (Ghibutiu 2000: 307-308). Apart from the non-existent or poorly developed market-related services in the centrally-planned system, the character of services, such as for example distribution or financial services, was entirely different from the one in market economies

<sup>13</sup> Based on the analysis of five countries – Czech Republic, Hungary, Poland, Slovakia and Slovenia - Haylik points out that Hungary was the only country recording employment growth throughout the period 1995-2004 (Havlik et al, 2008, 39).

<sup>14</sup> The intensity of changes in the 1990s differed depending on the level of employment in services at the outset of the transition and on the trends in agriculture employment, which in some countries served as a buffer to shedding labour in manufacturing.

<sup>15</sup> For example, a typical large conglomerate supplied auxiliary services such as kindergarten, doctor's office, residential construction, vacation facilities for employees, etc.

and basically had to align with the central plan requirements.<sup>16</sup> With the change of the socio-economic system, the CEECs were, on the one hand, faced with the need to adapt the existing services (e.g. distribution, financial services, communications) to market mechanisms, and on the other hand, to develop and assimilate new services that had not existed under the previous political and institutional system (e.g. asset valuation, auditing, management consultancy, marketing, advertising, public relations, etc.). Moreover, the adjustment of the business processes to technological modernisation (the introduction of ICT) required a variety of specialised services (e.g. computer-aided manufacturing, computer-aided design, intellectual property protection, and introduction of quality standards) (Stare 2007: 174). Foreign direct investment also played an important role in strengthening the service sector, particularly in some countries (e.g. in Hungary, Czech Republic, Estonia) and contributed to improved managerial and marketing skills, know-how, and service quality – the elements crucial for market services development.

The complexity of changes undertaken by the CEECs since the early 1990s in developing market services was immense and has increased the share of market services in value added and employment. Nevertheless, the changes could not be absorbed rapidly enough in terms of efficiency or quality of market services, availability of advanced knowledge-intensive services or their innovation capacity. These are considered the missing links of CEECs' services development, as they depend rather on soft elements (knowledge and market skills, risk taking, attitude, and service culture) which need more time to accommodate to the new situation. They are deeply rooted in the mindset of entrepreneurs, policy makers and academic circles and accordingly change gradually over longer periods of time (Stare 2007: 182).

Non-market services seem to have experienced a somewhat different trajectory during the transition period, thanks to relatively well developed public services that had been perceived as fundamental for supporting the political system. The term »relatively well developed« relates to a large share of employment in public services and their fairly good accessibility to all citizens; it is not related to their quality or the efficiency of public spending on services.<sup>17</sup> The socialist socio-economic system attributed high value to equality and economic security as an ideal (Tomer 2002: 422) and was better in providing certain »collective services«, such as health, education or security, while the »service gap« related to the provision of market-related services in a non-market economy remained (Kostecki

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16 Nevertheless, the situation differed across the CEECs. Slovenia for example had a unique system of so-called social ownership and a planning system combined with elements of a market system that allowed for the provision of some services on a market basis.

17 The empirical evidence confirms that even at the beginning of the 21<sup>st</sup> century the NMS achieve only average performance of public services with too many inputs, which points to a much lower efficiency compared to the EU15 (Afonso et al. 2006).

1996: 4). Consequently, public services redesign received little attention and was delayed. It is not surprising though, that the share of public services employment was rather high at the beginning of transition compared to the situation in market economies at the similar level of per capita GDP (Raiser et al. 2004), with significant implications for public finances (Rutkowski and Scarpetta 2005: 130). It goes without saying that rather generous expenditures for public services that resulted in high employment in these services could not be sustained under a different socio-economic system and evolving market mechanisms. However, in the first phase of the systemic change up to 1995, the public sector in the CEECs lacked a strategic development concept and was to a considerable degree used as a buffer against unemployment and remained oversized, with adverse selection (Csaba 2005: 141). During the transition, some parts of public services were privatised and new private providers of public services appeared. Besides, some specialized welfare services were disentangled from the in-house provision in enterprises.

Unlike in the EU15 where reforms in the public services started back in 1980s with the aim to create a management culture focusing on citizens and involving accountability for results, the process of improving the performance of the public sector had evolved very slowly in the CEECs until the late 1990s. Afterwards, these countries were faced with a need to cut public expenditures and downsize employment in public services. On the other hand, the demand for specialised high-skilled services, mainly in public administration, increased due to the establishment of new institutions and mechanisms needed for the implementation of market reforms and the accession to the European Union (e.g. legal services related to the harmonisation with the *acquis communautaire*, veterinary inspection services, autonomous regulatory agencies services, etc.). Additional employment in public administration was therefore not unusual; moreover, it is claimed that the magnitude of employment increase in the public administration was striking (Mickiewicz 2001: 15).

By and large, the service sector in the CEECs has made a big leap forward since the beginning of the 1990s and has narrowed the gap in relation to the EU average. Nevertheless, individual CEECs experienced different dynamics in the transformation of the service sector and also in the transformation of public and private services. What follows is the empirical investigation of the transformation patterns of two major groups of services, private and public in the CEECs relative to those in the developed market economies, and in particular of the convergence with the EU15.



### 3. EVOLUTION OF PRIVATE AND PUBLIC SERVICES EMPLOYMENT DURING TRANSITION

#### 3.1 STYLISED FACTS ON SERVICES EMPLOYMENT GROWTH

Since the 1990s, overall growth of the service sector in the CEECs can be attributed to a set of factors, of which market-oriented reforms played a pivotal role. In addition to these factors, which have primarily accelerated growth of market services, institutional changes also provided an impetus to public administration services (Stare 2007: 174). Our research confirms such patterns, since the share of private services employment increased in all NMS in the period 1995–2005 (Table 1). Cyprus and Malta as non CEECs surpassed the EU15 average share in private services employment in 2005, while the Czech Republic and Slovakia came closest to the EU15 average among the CEECs. Public services employment expanded as a share of total employment in most NMS, except three countries, which saw a decline in public services employment share. The NMS still lag behind the EU15 in terms of employment shares in both private and public services, with the gap being on average larger in the former (See Figure 1 and Figure 2).

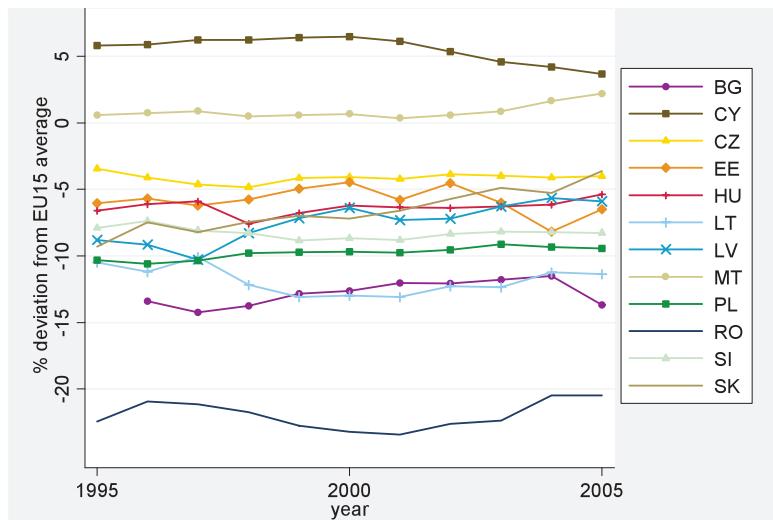
**Table 1: Share (%) of private and public services in total employment, 1995–2005**

	year	BG	CY	CZ	EE	HU	LT	LV	MT	PL	RO	SK	SI	EU15
Private services	1995	24.2	43.0	33.8	31.2	30.6	26.8	28.4	36.5	26.9	14.8	28.0	29.3	37.2
	2000	27.2	46.3	35.8	35.4	33.6	26.8	33.4	40.5	30.1	16.6	32.6	31.2	39.8
	2005	27.4	44.8	37.1	34.6	35.7	29.7	35.2	43.3	31.6	20.6	37.5	32.8	41.1
Public services	1995	18.9	19.1	19.3	24.6	28.1	24.9	26.3	25.8	21.7	13.9	26.0	16.5	27.1
	2000	18.3	21.2	20.3	24.3	26.1	27.9	26.2	27.0	21.7	14.4	26.7	19.3	26.9
	2005	16.9	22.0	20.8	26.4	26.9	27.2	26.8	28.0	22.5	16.9	24.0	21.3	28.3

Note: BG (Bulgaria), CY (Cyprus), CZ (Czech Republic), EE (Estonia), HU (Hungary), LT (Latvia), LV Lithuania), MT (Malta), PL (Poland), RO (Romania), SK (Slovakia), SI (Slovenia); for Bulgaria 1995 data is for the year 1996.

Source: Own calculations, EU KLEMS Database; WIIW 2008 and ILO 2009 for Bulgaria and Romania.

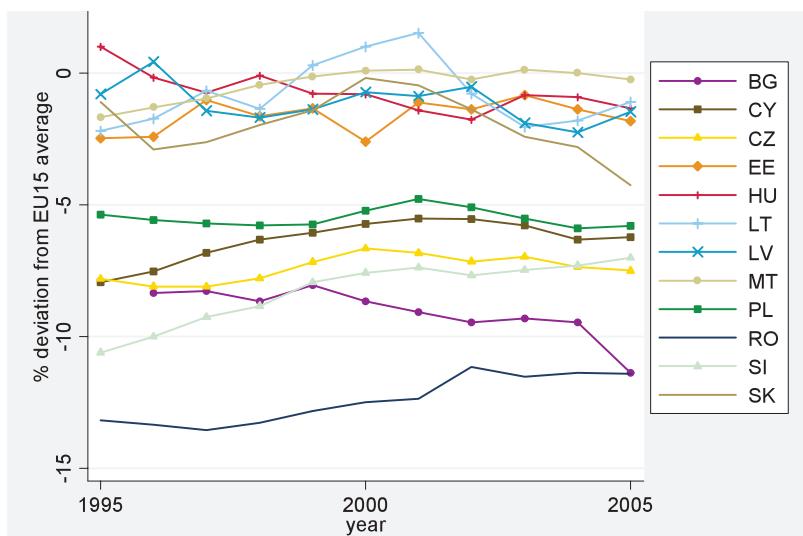
**Figure 1: Deviation (in % points) of private services employment share in NMS from EU-15 average, 1995-2005**



Note: BG (Bulgaria), CY (Cyprus), CZ (Czech Republic), EE (Estonia), HU (Hungary), LT (Latvia), LV Lithuania), MT (Malta), PL (Poland), RO (Romania), SK (Slovakia), SI (Slovenia).

Source: Own calculations, EU KLEMS Database; WIIW 2008 and ILO 2009 for Bulgaria and Romania.

**Figure 2: Deviation (in % points) of public services employment share in NMS from EU-15 average, 1995-2005**



Note: BG (Bulgaria), CY (Cyprus), CZ (Czech Republic), EE (Estonia), HU (Hungary), LT (Latvia), LV Lithuania), MT (Malta), PL (Poland), RO (Romania), SK (Slovakia), SI (Slovenia).

Source: Own calculations, EU KLEMS Database; WIIW 2008 and ILO 2009 for Bulgaria and Romania.

A detailed examination of individual service industries reveals that NMS remain well below the EU15 average as regards employment share in financial services, health, real estate, renting and business services (see Table 2). Wholesale and retail trade, transport and communications, public administration, defence and education were the closest to the EU15 average in terms of employment share in 2005. However, particularly in distributive trades and education, a number of NMS have surpassed the EU15 average. Bulgaria and Romania appear to deviate most from the average employment structure of the EU15, while some NMS reveal exceptionally high shares of employment in some services (e.g. Slovakia and Latvia in wholesale and retail trade, Lithuania and Estonia in transport services, Latvia and Estonia in education).

**Table 2: Share (%) of services in total employment by sectors, 1995-2005**

NACE	year	BG	CZ	EE	HU	LT	LV	PL	RO	SK	SI	EU15	USA
<b>G</b>	1995	9.8	14.7	12.6	12.7	14.3	12.8	13.9	6.4	10.9	12.3	14.7	17.6
	2000	11.8	14.6	13.8	14.4	14.4	15.4	15.0	8.6	13.7	12.3	14.7	17.2
	2005	12.4	14.4	13.3	15.2	15.8	16.7	15.3	10.6	17.9	12.3	14.7	17.0
<b>H</b>	1995	2.3	3.1	2.7	3.2	1.3	2.0	1.3	1.2	2.6	3.0	4.4	7.0
	2000	2.9	3.5	3.5	3.6	1.9	2.3	1.6	1.1	2.5	3.4	4.5	7.0
	2005	3.0	3.9	3.6	4.0	2.1	2.5	1.7	1.6	2.7	3.4	4.8	7.0
<b>I</b>	1995	7.7	6.9	10.0	8.8	6.4	8.7	5.9	5.0	7.6	5.7	6.1	4.1
	2000	7.4	7.2	9.8	8.1	6.5	8.3	5.5	4.8	8.2	5.8	6.2	4.4
	2005	6.0	7.0	9.0	7.3	6.5	9.3	5.3	4.9	6.7	6.0	6.1	4.1
<b>J</b>	1995	1.3	1.5	1.1	2.3	2.0	1.3	1.9	0.8	1.4	1.9	3.4	4.3
	2000	1.1	1.8	1.3	2.2	1.1	1.6	2.3	0.9	1.9	2.2	3.4	4.3
	2005	1.2	1.7	1.1	2.1	1.2	1.9	2.2	0.9	1.7	2.4	3.3	4.4
<b>K</b>	1995	3.1	7.6	4.9	3.6	2.8	3.7	4.0	1.4	5.4	6.4	8.7	11.2
	2000	4.1	8.6	6.9	5.3	3.1	5.9	5.7	1.2	6.3	7.5	11.1	13.0
	2005	4.9	10.2	7.6	7.1	4.3	4.8	7.2	2.5	8.6	8.8	12.2	13.1
<b>L</b>	1995	2.2	5.6	5.9	7.2	5.2	5.7	5.4	5.0	6.4	3.8	7.1	8.9
	2000	3.1	5.8	6.5	7.0	5.7	6.7	5.7	5.2	6.5	4.8	6.7	8.2
	2005	3.8	6.1	6.5	7.4	6.0	6.5	6.5	5.7	6.7	5.6	6.6	8.6
<b>M</b>	1995	7.8	5.3	8.5	9.3	9.6	8.9	6.5	3.9	9.3	5.3	6.4	7.8
	2000	7.3	5.6	7.8	8.4	11.6	9.2	6.5	3.9	8.8	6.0	6.3	8.0
	2005	5.6	5.5	9.1	8.3	10.2	8.9	7.7	4.5	8.0	6.5	6.6	8.7
<b>N</b>	1995	5.7	5.2	5.6	6.4	7.0	6.1	7.3	3.1	6.3	4.8	9.3	8.4
	2000	5.0	5.4	5.0	6.5	6.9	5.5	6.7	3.2	6.9	5.0	9.5	8.1
	2005	4.0	5.5	5.8	6.8	6.8	5.7	5.4	3.9	5.8	5.6	10.4	9.0
<b>O</b>	1995	3.2	3.1	4.5	5.2	3.1	5.5	2.5	1.8	4.0	2.6	4.3	7.0
	2000	2.9	3.5	5.1	4.3	3.8	4.8	2.8	2.1	4.7	3.5	4.4	7.4
	2005	3.5	3.6	5.1	4.5	4.3	5.8	2.9	2.8	3.5	3.6	4.6	7.9

Note: BG (Bulgaria), CY (Cyprus), CZ (Czech Republic), EE (Estonia), HU (Hungary), LT (Latvia), LV (Lithuania), MT (Malta), PL (Poland), RO (Romania), SK (Slovakia), SI (Slovenia); The 1995 figures for Bulgaria are for 1996.

Source: Own calculations, EU KLEMS Database; WIIW 2008 and ILO 2009 for Bulgaria and Romania.

Rubalcaba and Di Meglio (2009) analysed the changes in three categories of services for old and new member states in the period 1995-2005 to take account of the heterogeneity of services employment growth. Apart from public and private services, they introduced a third category of services based on ownership: some services have mixed ownership, meaning that they can be provided either by public or/and private suppliers<sup>18</sup>. Results presented in Table 3 indicate that in the period under observation the NMS experienced faster growth in market and in public services employment relative to the EU15. Employment in mixed services declined in NMS and increased slightly in the EU15. NMS recorded the largest gap in private/market services employment compared to the EU15, mainly due to low employment share in business services. Even though these services recorded the most rapid growth rates of all services in the period 1995-2005, there is still a substantial scope for catching up. There is almost no difference regarding the employment share in public services in a narrow sense of word (only public administration) between old and new member states. Mixed services display a gap in NMS employment share relative to the EU15, however the results vary across service activities. The lag of NMS behind the EU15 structure is the largest in health services, whereas in education NMS even have larger share of employment than the EU15 (Rubalcaba; Di Meglio, 2009).

**Table 3: Share of services in employment, 2005 and annual growth rate (AGR), 1995-2005 (%)**

	<b>Share in 2005, in %</b>		<b>AGR 1995-2005</b>	
	<b>EU15</b>	<b>EU10*</b>	<b>EU15</b>	<b>EU10*</b>
<b>Market services</b>	37.7	28.7	1.2	2.1
Distributive trades	15.1	15.3	-0.08	1.18
Hotels and restaurants	4.9	2.7	1.46	2.22
Water & Air Transport	1.7	1.1	2.09	1.59
Financial services	2.9	2	-0.74	0.81
Real estate, renting and business services	13	7.5	3.15	4.75
<b>Public services</b>	6.7	6.6	-1.12	1.36
<b>Mixed services</b>	25.3	22	0.5	-0.3
Education	6.7	7.6	0.36	0.66
Health and social work	9.8	5.7	0.93	-1.35
Other community, social and pers. services	4.9	3.6	1.19	0.93
Post and telecommunications	1.5	1.4	-0.93	-1.16
Inland transport	2.5	3.7	-0.83	-1.15

\* NMS that joined EU in 2004.

Source: Rubalcaba, De Meglio, 2009, based on EU KLEMS Database.

18 Some services denoted as private services are supplied both by public and private providers (for example transport services). However, the share of publicly and privately supplied transport services is difficult to measure and it varies among modes of transport. While railway transport is mostly publicly provided, road transport is more extensively supplied by private sector.

This broader perspective confirms that the NMS have narrowed the gap in services employment relative to the EU15 average<sup>19</sup>. The catching up process differed substantially across countries and across service activities, owing to different starting positions and the efficiency in implementing the reforms.

### 3.2. CATCHING UP AND CONVERGENCE PROCESS

In order to test whether the observed progress in employment structure of NMS towards old EU15 was significant and deeper in less-developed economies, we turn to  $\beta$ -convergence analysis. Since the NMS constitute a group of less-developed countries in the sample of EU members, the results at the same time test for the convergence of NMS employment structure towards developed EU members. The following regression equation is estimated:

$$\frac{1}{T} \log \left( s_{ijT} / s_{ij0} \right) = \alpha - \left[ \left( 1 - e^{-\beta T} \right) / T \right] \log \left( s_{ij0} \right) + \varepsilon_{ij0,T}, \quad (1)$$

where  $s_{ijt}$  is employment share of country  $i$  in service sub-sector  $j$  at time  $t$ ,  $\beta$  is the rate of convergence, and  $T$  is the last period in the observed time interval. If the term that multiplies the initial share turns out to be negative, we conclude that less-developed countries tend to increase relative employment in a given industry faster than developed economies<sup>20</sup>.

19 We do not enter into the discussion of differences between the old and new member states in other characteristics of employment, such as for example part-time work, which plays an important role in the old EU but is almost negligible in the NMS (Landesmann et al., 2004).

20 The form of estimation equation enables to test for absolute convergence, but not conditional convergence. If the initially advanced countries converge to a higher steady state level of employment share, the estimates of  $\beta$  will be biased towards zero (Barro and Sala-i-Martin 2004: 467). Insignificant coefficients thus rule out absolute convergence but are not able to reject conditional convergence.

**Table 4: Beta convergence statistics, EU27 (1995-2005)**

	1995-2005	1995-2000	2000-2005	Chow test	$\beta$	LR test
Private Services	-0.064*** (0.013)	-0.037* (0.021)	-0.092*** (0.020)	F(1, 50) = 3.43 Prob>F = 0.0700	0.101** (0.037)	$\chi^2(2) = 162.74$ Prob > $\chi^2 = 0.000$
Public Services	-0.055** (0.026)	-0.076** (0.033)	-0.044 (0.041)	F(1, 50) = 0.37 Prob>F = 0.5438	0.080 (0.058)	$\chi^2(2) = 155.21$ Prob > $\chi^2 = 0.000$

Notes: Standard errors in parentheses. \*, \*\*, \*\*\* denote the significance at 10%, 5% and 1%, respectively. Chow tests test whether the coefficients on initial employment share are the same for the two sub-periods.  $\beta$  is calculated by nonlinear least squares estimation of equation (1). The likelihood ratio (LR) statistic refers to a test of the equality of the coefficients of the log of initial employment share over the two sub-periods (1995-2000 and 2000-2005). Number of observations is 27.

Source: Own calculations, EU KLEMS.

Table 4 reveals that convergence was faster in private than in public services. The two groups recorded opposite trends in the strength of convergence: private services of the NMS were catching up faster in the second half of the period, while the convergence within the public services was stronger in the 1990s. However, the difference in convergence intensity is not confirmed by the Chow tests due to large standard errors. On the other hand, nonlinear estimation and subsequent LR test statistics corroborates faster convergence in private services, as well as the opposite time trend of the convergence intensity. The evidence thus suggests that NMS converged faster towards more advanced EU economies in private services and the convergence speed intensified in time. The fastest convergence is observed in wholesale and retail trade, hotels and restaurants, public administration and defence and other community, social and personal services. Financial intermediation experienced no significant convergence across EU27, neither in the entire period nor in any of the two sub-periods, even though it attracted by far the largest inward FDI into the CEECs<sup>21</sup> (UNCTAD 2004: 302).

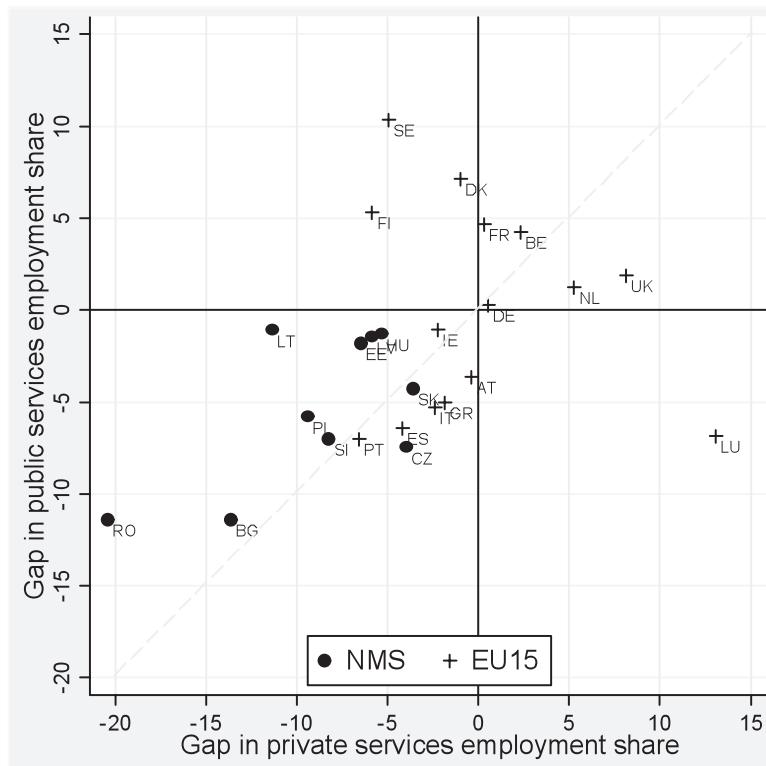
In order to further illustrate the changing landscape of public and private services in EU27, a cluster analysis was introduced to check the emergence of clusters of EU countries with respect to employment shares in private and public services.<sup>22</sup> Cluster analysis applied reveals potential groupings of countries with similar employment shares in both private and public services. Figure 3 presents percentage point deviations from the EU15 average for the latest year available

21 This could be explained by a very low level of financial services development in the CEECs at the outset of reforms, which could not be significantly improved in the medium term.

22 Cluster analysis applied reveals potential groupings of countries with similar employment shares in both private and public services.

for all EU member states<sup>23</sup>. The first cluster that can be identified is composed of the Netherlands and UK and can be aligned with the Anglo-Saxon economic system characterised by a predominant share of private services employment. Finland, Sweden, and Denmark can be ranked in a Nordic welfare-state category of countries with extensive provision of public services, whereas France, Belgium, Germany and Ireland conform to the Continental model, being close to the EU15 average employment share in both types of services.

**Figure 3: Deviations (in % points) from EU15 average employment shares in private and public services, 2005.**



Note: AT (Austria), BE (Belgium), BG (Bulgaria), CY (Cyprus), CZ (Czech Republic), DE (Germany), DK (Denmark), EE (Estonia), ES (Spain), FI (Finland), FR (France), GR (Greece), HU (Hungary), IE (Ireland), IT (Italy), LT (Latvia), LU (Luxembourg), LV (Lithuania), MT (Malta), NL (the Netherlands), PL (Poland), PT (Portugal), RO (Romania), SE (Sweden), SK (Slovakia), SI (Slovenia), UK (United Kingdom).

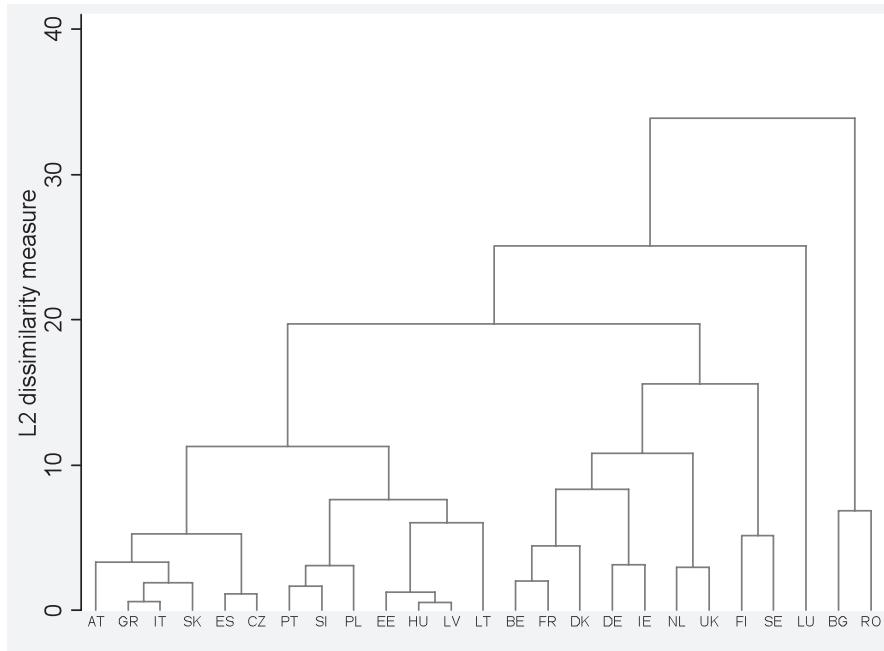
Source: Own calculations, EU KLEMS Database (<http://www.euklems.net>); WIIW and ILO for Bulgaria and Romania.

23 Excluding Cyprus and Malta.

The same refers to a cluster composed of Poland, Slovenia, and Portugal, which have roughly equally advanced private and public services, but a larger deviation from the EU average. The group comprising of Lithuania, Estonia, Latvia, and Hungary is closer to the EU15 average in terms of public services employment share, while the last group (Czech Republic, Spain, Slovakia, Italy, Greece, and Austria) is relatively better off in terms of private services. An obvious outlier among the more advanced EU15 is Luxembourg with an above-average share in private services and a relatively low share of public services employment. Romania and Bulgaria are the outliers with large discrepancies in employment shares in both types of services.

Overall, the cluster analysis could not identify very homogenous groups (see Figure 4), although the patterns of some groups tend to resemble those proposed by Gadrey's models of service economy (Gadrey, 2007: 50-52).

**Figure 4: Dendrogram for hierarchical cluster analysis**



Source: Own calculations, EU KLEMS.

Another feature emerging from Figure 3 should be noted – the bottom right quadrant remains empty, except for Luxembourg, which is the only EU country with an above-average employment in private services and a large gap in employment in public services. The fact that no other EU country fits into a similar pattern seems to reflect the importance of public services employment. It is maintained further by the ageing population requiring more health care and increasing role of education services. By the manner of construction of Figure 3, no decisive conclusions can be made regarding the general level of public and private services

employment shares. However, two conclusions can be drawn based on the distribution of countries' positions relative to the EU15 average. First, higher level of development results in a higher employment share in both groups of services on average. Second, according to the positive association in the scatter plot, there is no imminent trade-off between private and public services employment shares, as they obviously complement rather than substitute each other. Moreover, the integration of NMS into cluster analysis discloses additional characteristics of services evolution and suggests the existence of more varied service models in the enlarged Europe. This calls for a thorough examination of the determining economic and societal parameters that shape the service economy in different environments – a task that reaches beyond the scope of this analysis.

### 3.3 BENCHMARKING STRUCTURAL CHANGE IN NMS SERVICES EMPLOYMENT

In order to acknowledge for different steady state levels of services employment towards which NMS converge, a complementary analysis was employed, which derives benchmarks for a structure of employment in service sectors from the established market economies. To this end, Chenery-type cross-country regressions were used (Chenery and Taylor 1968). This approach provides benchmarks for a given level of development based on the data from non-transition countries across the globe. Accordingly, the shift of NMS employment share relative to the corresponding benchmark shows the progress towards economic structure of the market economy at a certain income level.

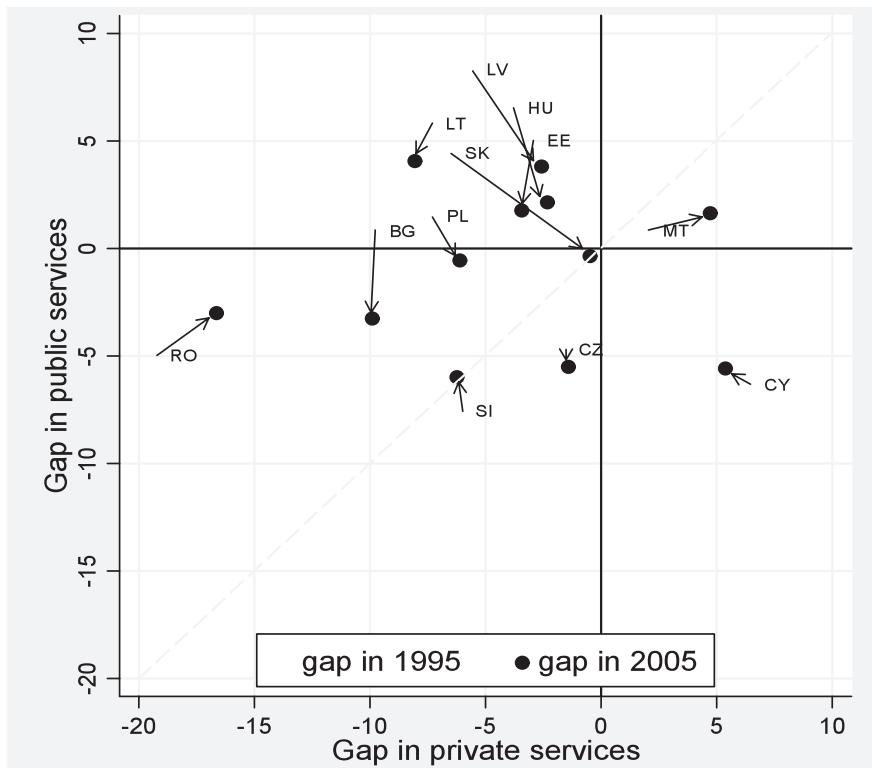
The approach is similar to Raiser et al. (2004), but with some important modifications. Our analysis focuses on private and public services, further dissected into narrower categories, while Raiser et al. (2004) analyzed the changes in the structure of employment across industry, agriculture and services. Further, we investigate a more recent time interval (1995-2005), when the initial transition-related recession in the first half of the 1990s was over. Most importantly, we introduce a series of dynamic reference points for employment shares in the selected market economies for each year, while the previous analysis referred to a single benchmark in 2000. Since technology and economic progress in benchmark countries change over time, we could rightly expect the shifts in benchmarks as well. So, the comparison of current employment shares on the past benchmark shares would be invalid.

To determine the benchmark shares for each service sub-sector, the regression analysis was employed, using data for approximately 50 market economies worldwide,<sup>24</sup>

<sup>24</sup> Australia, Argentina, Bangladesh, Bolivia, Canada, Chile, Colombia, Costa Rica, Cyprus, Egypt, El Salvador, Iceland, Israel, Japan, Korea, Malta, Malaysia, Mauritius, Mexico, New Zealand, Norway, Panama, Peru, Philippines, Saudi Arabia, Singapore, Sri Lanka, Switzerland, Taiwan, Thailand, Turkey, Uganda, USA, Uruguay, and EU15 countries.

regardless of the level of development. The latter is proxied by GDP per capita at PPP and is used to estimate the relationship between the level of development and the share of employment in a given service sector. We apply a 3-rd order polynomial in log GDP per capita in PPP to make the closest fit to the employment share.<sup>25</sup> These reference employment shares are then compared to corresponding shares in NMS in order to analyze the dynamics of structural change in private and public services from 1995 to 2005.

**Figure 5: Distance between actual and benchmark employment shares in private and public services (in % points), 1995 and 2005**



Note: Values represent % point deviations from Chenery-type benchmark employment shares. Arrows are informative and do not correspond to actual transition paths. AT (Austria), BE (Belgium), BG (Bulgaria), CY (Cyprus), CZ (Czech Republic), DE (Germany), DK (Denmark), EE (Estonia), ES (Spain), FI (Finland), FR (France), GR (Greece), HU (Hungary), IE (Ireland), IT (Italy), LT (Latvia), LU (Luxembourg), LV (Lithuania), MT (Malta), NL (the Netherlands), PL (Poland), PT (Portugal), RO (Romania), SE (Sweden), SK (Slovakia), SI (Slovenia), UK (United Kingdom).

Source: Own calculations, EU KLEMS, WDI Online Database (World Bank 2009a), ILO 2009.

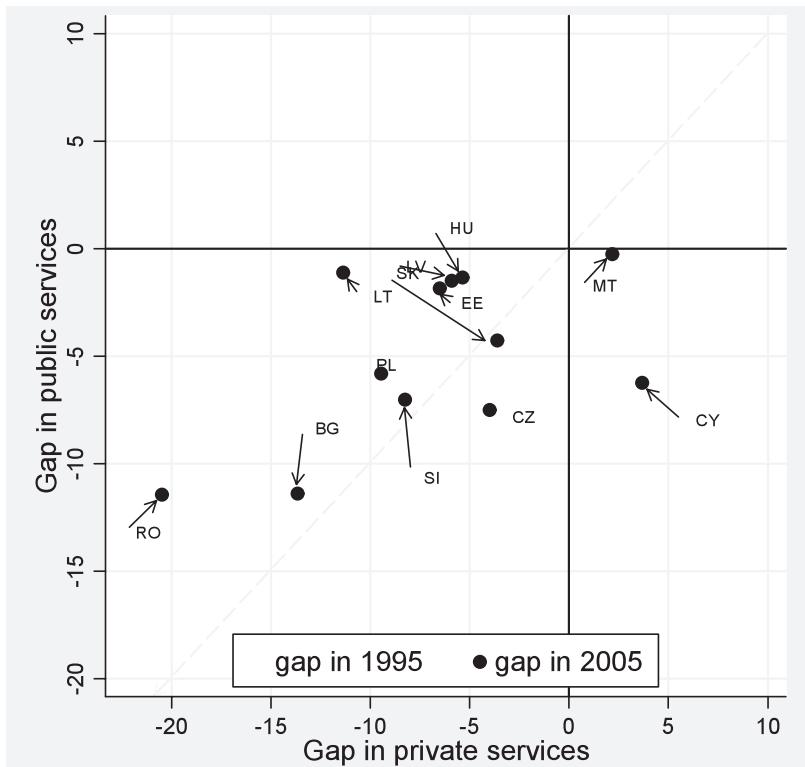
<sup>25</sup> We experimented with lower order polynomials and linear instead of log-linear model as well, yet the chosen specification produced the best fit.

Figure 5 shows the evolution of private and public services employment with respect to the benchmark values derived from consecutive regressions of sectoral share of employment of market economies. In half of the NMS, the employment shares in private services converged to the reference point by 2005. On the other hand, the development of private services in Bulgaria, Estonia, Lithuania, and Slovenia has not matched the economy-wide progress in terms of GDP per capita, either due to slow transformation from the agrarian to service economy (Bulgaria) or because of a slower implementation of reforms and still rather high employment in manufacturing. Malta and Cyprus as market economies clearly differ from the rest of the NMS in regard to private services employment, as it was above the benchmark level in both years.

The most interesting feature of the structural change in public services is the top-down convergence to benchmark employment shares in many NMS, unlike the bottom-up convergence in the private services for some countries (Romania, Poland, Slovakia, Latvia and Hungary) and even divergence in others (Slovenia, Czech Republic, Cyprus, Bulgaria, Lithuania, and Estonia). In countries with the highest initial share of employment in public services, the number of employed decreased substantially over the 1995-2005 period, due to a vast over-employment and hard budget constraints that could not support overmanned public sector. Only Romania, Slovenia, Czech Republic and Cyprus started below the benchmarks of public services employment in 1995 and have been more or less rapidly converging upwards to the reference levels. Malta displays a different pattern also in public services, diverging further from the benchmark. Even though the actual employment share in public services was and remains below the EU15 average, adjusted for the level of development in the CEECs, some of these countries still maintain disproportionately large shares of employment in public services, reflecting over-employment in these services in the past. As pointed out above, the former socialist economies stressed equality and social protection as the ultimate goals of welfare society, regardless of the efficiency of public spending on public services.

In contrast, Figure 6 compares the dynamics of employment shares in the two distinct classes of services with the average employment shares in the EU15. It reveals that four countries (Hungary, Latvia, Slovakia, and Poland) converged towards the EU15 employment share in private services but diverged from it in the public services. On the contrary, four other NMS (Slovenia, Czech Republic, Lithuania, and Estonia) moved towards the EU15 average in public services employment share but deviated along the private services dimension. Two contrasting cases are Romania and Bulgaria, where the former made progress in both service groups, while the latter retreated along both dimensions of services. As expected, Malta and Cyprus deviate from the CEECs patterns with the above-average employment share in private services relative to the EU15. The changes in public and private services employment in most NMS in the period 1995-2005 brought about more symmetric disparity in both dimensions (a move towards dashed symmetry line), reducing either relative weakness in private services (Poland, Slovakia, Hungary and Latvia) or relative shortcoming in public services (Slovenia and Czech Republic).

**Figure 6: Distance between actual and EU15-average employment shares in private and public services (in % points), 1995 and 2005**



Note: Values represent % point deviations from the EU15 employment shares in the corresponding years. Arrows are informative and do not correspond to actual transition paths.

Source: Own calculations, EU KLEMS.

The comparison of Figure 5 and 6 uncovers some interesting features. First, the progress measured by the income level benchmarks was on average bolder than the improvements relative to the EU15 average. This comes as no surprise given that lower development of the NMS corresponds to lower benchmark values and thus lower deviations. If we let the Euclidian distance between the two time points measure the extent of transformation (ignoring the actual direction of the structural change), all countries but Slovenia and Cyprus achieved greater changes in the benchmark context.<sup>26</sup> Second, as an alternative measure of convergence we can study the decrease in the distance of employment shares

<sup>26</sup> Simple average of the distance (length of vectors) across countries in case of benchmark comparison was 3.2 percentage points, while the figure for EU15 average comparison is 2.5 percentage points. In both benchmark types, larger advancement was achieved in private services dimension.

in the two services groupings from the comparator value (distortion index<sup>27</sup>). By this measure of transformation, all NMS but Slovenia, Czech Republic and Cyprus achieved larger reduction of distortion measure in case of market benchmark comparisons.<sup>28</sup> Third, where benchmark-based comparisons revealed top-down convergence of public services, no such pattern could be observed in case of comparisons with the EU15. Finally, it is worthwhile noting that the convergence process in the NMS regarding the private and public services employment shares relative to the EU15 average or market economies' benchmarks is a continuous process. Substantial gaps still exist and they are larger in private services employment, which points to the need of further structural reforms. Overall, the analysis reveals a faster catching-up of NMS in private services than in public services in the period 1995-2005, which is in line with different developments of both groups of services in the past. Observing the transformation of the service sector in the NMS through the convergence of employment shares in public and private services does not give a sufficient insight into the effects of those processes from the perspective of more qualitative dimensions of the structural transformation, which are no less important.

### 3.4 ASSESSING THE PERFORMANCE OF PRIVATE AND PUBLIC SERVICES

In the subsequent empirical analysis, the efficiency/performance of distinct service sub-sectors is examined to see the extent to which the changes in employment shares entailed the progress in the efficiency of private services and in performance of public services in the NMS relative to the EU15. Value added per employee<sup>29</sup> is used as a standard measure of efficiency of private services, although the measurement of efficiency in services is flawed with methodological and data problems. They refer to poor availability of accurate price deflators for service sub-sectors, exchange rates, and more precise measurement of employment.<sup>30</sup> In addition, progress in measurement of service prices and service output is uneven both

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27 Distortion index measures the distance of each country from the benchmark structure.

28 Simple average of the reduction of the distance from the origin (distortion measure) in case of benchmark comparison was 1.8 percentage points, while the counterfactual for EU15 average comparison is 1.0 percentage points.

29 Value added at current basic prices are expressed in euro (ECUs) using average yearly exchange rates.

30 In measuring productivity growth in services, the accurate measurement of labour input is very important (number of employees vs. hours worked) since it may be influenced by differences in working time and organisational patterns of employment both across industries and countries (Wölfel, 2005: 58).

across countries and across market service industries.<sup>31</sup> These problems hamper methodologically consistent comparisons of services productivity in time, across countries, and industries.<sup>32</sup> The results should thus be interpreted with caution.

Value added per employee is not an appropriate measure for assessing the performance of public services, as they are predominantly not driven by efficiency concerns but by securing welfare to citizens in different areas. In order to capture these effects, public services performance is approximated by proxy indicators for different public services and compiled into a single summary indicator.<sup>33</sup> For each public service, indicators are identified, which are in our view a good approximation of performance of this sector. Another criterion for selecting individual performance indicators is the availability of data for the CEECs in the longer period of time.<sup>34</sup> The following indicators are used to approximate individual public services performance:

Performance in the Public administration and defence sector (L)<sup>35</sup> is measured by World Bank's Worldwide Governance Indicators database, from which a composite index is formed using the following equally-weighted indicators:<sup>36</sup> Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption. The indicators are expressed in scores in the range between -2.5 and +2.5, where the higher values correspond to better governance. As 1996 is the first available year for this series, it is used instead of 1995.

The performance of Education (M) is measured by the share of tertiary educated (ISCED 5-6) in a population aged 25 to 64 years and a pupil/teacher ratio. A composite index was formed using equal weights for both indicators.

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31 Inklaar demonstrates that on average 30% of market services' output is deflated by unacceptable or biased methods; the share is the biggest in business services and in financial intermediation, while in hotels and restaurants it is rather limited. Variations across countries are even larger (Inklaar et al., 2008, 73).

32 Comparison between transition and established market economies imposes additional problems, due to the large changes in relative prices in the transition economies and corresponding shifts in real exchange rates.

33 The summary indicator of public services was created by a weighted average of indicators in the corresponding sub-sectors, where the weights represented EU15 average value-added-based weight of a sub-sector.

34 The approach follows Afonso et al. (2005) in constructing the public sector performance index. Due to the lack of data for the CEECs for longer time periods, our analysis relies on a narrower set of indicators.

35 A number of proxies exist for public administration performance in the framework of synthetic indicators, such as for example by the World Bank (Doing Business), IMD (World Competitiveness Yearbook), World Economic Forum (Global Competitiveness Report), however data prior to late 1990s are not available for most CEECs.

36 We also experimented with principal component analysis of the four indicators. The analysis showed that the first component, explaining 93% of the total variance, yielded component scores that were 99.9% correlated with the simple equally-weighted index.

For the performance of Health and social work (N) data on infant mortality rate and life expectancy at birth were used. A composite index was formed using equal weights for both indicators.

For the performance of Community, social and personal services (O) data on the inequality of income distribution in terms of income quintile share ratio (S80/S20)<sup>37</sup> were used.

Table 5 presents the progress of NMS in different service sub-sectors across time, relative to the EU15 average. Indicators for both public and private services are calibrated, so that the EU15 average in a given year represents the value 100 and the other countries' values are expressed relative to this figure. The common feature of productivity shifts in private services is that all countries converged towards the EU15 productivity level, however the gap remains large. Cyprus is the only NMS that has surpassed the average EU15 productivity level in private services in 2005; Slovenia and Malta surpassed 50% of the productivity level of the EU15, while in other NMS value added per employee was on a much lower level. Estonia and Slovenia recorded the largest relative increase in private services productivity (by almost 30 index points). Czech Republic, Slovakia and Hungary, on the other hand, experienced the lowest relative increase in that regard.

**Table 5: Productivity in private services and performance in public services, 1995-2005**

	year	BG	CY	CZ	EE	HU	LT	LV	MT	PL	RO	SK	SI	EU15
Private services	1995	NA	80.3	20.4	14.2	30.9	12.0	12.1	55.8	22.7	11.1	22.5	30.5	100
	2000	14.6	90.4	24.6	27.3	32.1	27.7	24.1	61.9	34.2	24.1	24.6	43.7	100
	2005	20.1	105.9	32.8	43.2	42.8	33.6	33.6	50.7	38.2	30.2	32.7	58.7	100
Public services	1995	83.7	98.1	91.7	100.7	96.3	99.6	84.0	84.1	84.0	81.9	87.4	95.6	100
	2000	89.3	99.9	90.8	92.8	98.5	101.7	84.5	89.2	86.6	77.4	86.7	97.9	100
	2005	91.7	100.0	92.9	95.6	96.0	90.6	85.5	97.8	82.9	78.4	90.5	98.6	100

Note: BG (Bulgaria), CY (Cyprus), CZ (Czech Republic), EE (Estonia), HU (Hungary), LT (Latvia), LV (Lithuania), MT (Malta), PL (Poland), RO (Romania), SK (Slovakia), SI (Slovenia).

Source: EU KLEMS, Eurostat, World Development Indicators (World Bank 2009a), ILO, WIIW, Worldwide Governance Indicators (World Bank 2009b).

Performance of public services, based on selected indicators, converged closer to the EU15 average than was the case in private services, mainly on account of a good starting position in 1995 when some NMS were very close or even above the EU15 average (Estonia, Lithuania and Cyprus). The lagging of other NMS behind the EU15 average was below 10 percentage points, with the exception of Latvia,

<sup>37</sup> The ratio between the average household's income of the top 20% of the income distribution to the bottom 20%. Here an implicit assumption was made that inequality higher than EU15 average indicates poorer performance of community, social and personal services and vice versa.

Poland and Romania. In the period 1995-2005, the majority of NMS have improved their relative performance in public services compared to the EU15 average, while four NMS have deteriorated their performance in public services, with Lithuania and Estonia marking the highest decline. Cyprus, Slovenia and Malta were the closest to old member states' benchmark in 2005.

**Table 6: Productivity or performance in service sectors relative to the EU15 average (in index numbers), 1995-2005**

	year	BG	CY	CZ	EE	HU	LT	LV	MT	PL	RO	SK	SI	EU15
<b>G</b>	1995	NA	63.7	18.9	13.2	24.6	11.8	9.1	64.5	30.7	11.1	24.3	31.7	100
	2000	7.0	65.2	30.1	23.9	24.2	25.3	24.7	59.2	43.3	12.6	26.7	44.7	100
	2005	8.8	69.4	40.2	48.5	36.1	36.1	34.3	53.3	51.0	21.0	35.9	67.2	100
<b>H</b>	1995	NA	88.7	30.2	9.2	22.8	15.3	7.4	75.2	21.4	15.8	17.1	31.5	100
	2000	9.9	90.0	23.2	14.3	18.6	21.2	12.9	70.2	31.2	25.9	19.2	39.5	100
	2005	NA	81.1	29.7	23.0	24.2	26.3	23.3	56.4	37.4	34.3	30.0	55.1	100
<b>I</b>	1995	NA	66.7	25.3	10.1	16.3	9.2	13.0	43.7	16.3	8.5	19.7	25.7	100
	2000	11.4	72.2	27.8	25.6	21.5	27.0	24.5	59.0	25.2	14.2	21.6	39.3	100
	2005	17.5	70.7	40.1	34.3	32.3	38.6	26.3	51.8	34.6	28.4	33.8	55.2	100
<b>J</b>	1995	NA	44.4	24.9	12.9	24.8	5.3	21.1	32.4	14.9	24.8	41.9	45.6	100
	2000	14.6	50.8	24.0	38.4	23.0	20.8	33.6	54.7	33.9	8.9	16.5	51.9	100
	2005	22.7	54.9	34.1	50.4	42.8	26.8	33.5	36.3	32.0	19.8	43.2	48.7	100
<b>K</b>	1995	NA	103.8	17.0	17.2	42.6	14.4	11.8	58.5	22.2	7.8	17.9	27.3	100
	2000	20.4	119.0	21.0	28.9	43.7	31.6	23.1	64.8	32.6	36.8	27.0	43.3	100
	2005	NA	152.0	26.9	44.3	52.0	33.5	36.9	52.0	34.6	37.5	28.5	58.5	100
<b>L</b>	1996*	52.0	92.5	81.8	76.5	78.9	61.2	65.1	70.4	76.9	53.8	72.1	84.1	100
	2000	61.5	86.7	77.8	83.4	83.4	71.2	73.0	89.4	77.0	56.2	71.6	82.5	100
	2005	65.1	85.3	80.7	86.7	80.3	76.0	77.7	88.5	72.2	58.7	79.2	82.2	100
<b>M</b>	1998*	NA	105.1	70.3	167.7	98.8	162.3	97.2	NA	71.1	87.4	74.6	90.0	100
	2000	99.5	109.7	71.4	128.3	102.1	158.6	94.5	68.8	80.0	72.4	74.6	92.2	100
	2005	99.4	110.8	77.1	123.3	100.9	131.2	104.1	91.5	93.4	71.3	76.4	95.2	100
<b>N</b>	1995	91.3	98.3	96.6	89.2	92.9	91.3	86.6	98.5	92.6	86.8	94.3	98.7	100
	2000	91.3	99.6	98.4	93.5	93.7	94.2	91.7	99.6	95.5	88.3	94.9	98.7	100
	2005	92.2	99.3	98.1	95.1	94.7	93.3	92.6	98.8	95.9	89.6	94.9	98.6	100
<b>O</b>	1995	129.4	NA	131.4	72.5	131.4	98.0	96.1	NA	100.0	117.6	121.6	119.6	100
	2000	117.8	108.9	124.4	60.0	126.7	88.9	77.8	97.8	95.6	100.0	NA	128.9	100
	2005	122.9	110.4	122.9	75.0	116.7	56.3	60.4	118.8	62.5	97.9	118.8	129.2	100

Notes: BG (Bulgaria), CY (Cyprus), CZ (Czech Republic), EE (Estonia), HU (Hungary), LT (Latvia), LV (Lithuania), MT (Malta), PL (Poland), RO (Romania), SK (Slovakia), SI (Slovenia). \* Data for 1995 not available.

Source: EU KLEMS, Eurostat, World Development Indicators (World Bank 2009a), ILO, WIIW, Worldwide Governance Indicators (World Bank 2009b).

The performance of individual public services recorded different trajectories across the NMS (Table 6). The performance of community, social and personal services (O) measured by the inequality of income distribution (S80/S20 income quintile share ratio) deteriorated considerably in most NMS in the period 1995-2005. Overall, in 2005 the inequality of income distribution in individual NMS displays the largest deviation from the EU15 standards, both upwards and downwards. On the one hand, the income inequality was much lower in seven NMS compared to the EU15, whereas Lithuania, Latvia, Poland and Estonia reveal much higher income inequality than old EU members. The first three countries have experienced the highest decline since 1995, which points to the trade-off between general progress of those economies and welfare deterioration.

In general, the NMS have improved their relative performance in Public administration (L) evaluated on the basis of governance indicators. It is notable that Romania and Bulgaria recorded much lower level of performance in 2005 than the NMS from the first enlargement wave, suggesting that earlier conclusion of the accession process might have contributed to a better governance in public administration. Performance in education improved in all NMS relative to the EU15 average, except in two Baltic States<sup>38</sup> and Romania. In 2005, five NMS displayed better performance in education than the EU15 on average and further two countries came very close to the EU15 standard. In Health and social work (N), the performance of all NMS was rather similar in 1995 and the deviation from the EU15 average was fairly small. In the period up to 2005, the NMS performance converged even closer to the EU15 average. Such results indicate that proxy indicators used to calculate the performance of health and social work (infant mortality rate and life expectancy at birth) might not be the most appropriate to explain the performance of these services<sup>39</sup> and their changes in time.

The assessment of changes in public services performance in the NMS relative to the EU15 standards based on a limited set of indicators reveals quite a few important features about the qualitative transformation of public services. This should, nevertheless, be seen as an exploratory attempt and the results should be interpreted with caution. Due to limited data availability for other indicators of public services performance, the ones used might not be the most adequate to capture the qualitative changes that occurred during the transition. There is much

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<sup>38</sup> It has to be noted that already in 1995 Estonia and Lithuania surpassed the EU15 average by an extensive margin.

<sup>39</sup> It has to be noted that life expectancy at birth as a proxy for the performance of health sector does not necessarily reflect only the quality of the healthcare system. Nutrition patterns of the population in a country/region and the extent of risky behaviour of individuals (e.g. alcohol and tobacco consumption, obesity, etc.) can exert significant influence on the health performance indicators.

room for improvement in assessing the performance of public services when data on the outcome indicators for public services is available.

After having explored the main features of the catching-up process in public and private services employment in NMS, we aim to assess the underlying factors behind the growth of services employment during transition; in particular we aim to reveal if standard theoretical explanations are valid for the economies that have undergone the transformation of their economies from the planning system to the market economy.

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## 4. DETERMINANTS OF SERVICES EMPLOYMENT GROWTH IN NMS

### 4.1. EXPLAINING SERVICES GROWTH - EVIDENCE FROM LITERATURE

Ever since the service sector emerged as an important part of market economies, the scholars have sought to uncover the drivers underlying the growth of this sector. An extensive body of literature focused on factors having critical impact on the increase in employment and value added in services. Not entering into details of the historical evolution of economic thought regarding the causes of the tertiarisation process,<sup>40</sup> it is safe to argue that initially two basic perspectives were proposed. In his pioneering work, Clark argued that the increasing demand for services is the driving force of services growth (Clark, 1957) and has its origin in the „Engel's law“ and income elasticity of demand. Accordingly, the growth of services employment is mainly explained by the shifts in income elasticity of demand. Most commonly used explanations relate services growth to income growth and one of the stylized facts of economic development is that the share of services in GDP and employment rises as per capita income increases (Francois and Reinert, 1996). Indeed, the expansion of services employment is unambiguously associated with the rise in the living standard of modern economies. However, Messina suggests that the richest countries might have reached a saturation level in the expansion of the demand for services (Messina, 2004).

Other standard explanation claims that the supply side factors are responsible for the growth of services and this is most clearly recognized as Baumol's „cost disease.“<sup>41</sup> In his view, the productivity growth in services is slower than in manufacturing, while wages in services increase simultaneously with wages increase in manufacturing (due to rising demand and necessity to compete for employees with jobs that did experience productivity gains), causing the reallocation of employment to lower productivity sector. In the long run, the productivity differential slows

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40 For details see Messina, 2004 and Maroto, 2009.

41 Baumol's cost disease (also known as the Baumol's Effect) is a phenomenon described by W. J. Baumol and W. Bowen in the 1960s. It involves a rise of salaries in jobs that have experienced no increase in labour productivity in response to rising salaries in other jobs (industries) which did experience such labour productivity growth.

down the total aggregate growth (Baumol, 1967). These two major approaches were considered sufficient to explain the long-term dynamic structural evolution (Rowthorn, Wells, 1987). While both of them gained substantial support and refined argumentation of scholars, the new dynamics of services development in the last four decades brought to the surface some elements that exert additional impact on services growth. They relate to intermediate demand for services spurred by the increasing specialisation, technological progress, in particular ICT introduction, and organisational change; they were emphasised by a number of distinguished scholars (Fuchs, 1968; Gemmel, 1982; Gershuny, 1983; Riddle, 1986, Nusbaumer, 1987, Elfring, 1989). Furthermore, increased competition between service suppliers on a global scale, demographic developments that spur growing provision of certain public services, institutional setting<sup>42</sup> and welfare-state are suggested to have given rise to the growth of services (Wölfel, 2005, D'Agostino et al., 2006). Finally, based on extensive survey of literature, Maroto summarizes four areas that give rise to services growth: production factors (mainly labour and human capital), productive systems (flexibility and goods-services integration), markets and income and institutional system (public services, regulation, cultural and social changes) (Maroto, 2009, 23).

A number of studies have empirically confirmed the key factors that lie behind the employment growth in services and they often pointed to a combination of factors. Per capita income, size of the welfare-state and the extent of female employment are found to be the main drivers of services employment growth in OECD economies in the period 1984-1998, along with some other factors, such as labour market institutions (OECD, 2000). Similarly, the study by Messina reveals positive impact of per capita income and the size of public sector on services employment for the sample of 27 OECD economies for the longer time period (1970-1998). In addition, productivity differential between services and manufacturing, the investment rate, the degree of urbanization and the administrative burden on the creation of new firms are found to positively influence services employment growth while no such effect applies to female employment and employment protection legislation (Messina, 2004).

Following the econometric approach applied in the previous studies, D'Agostino et al. (2006) extend the examination of the determinants of services employment growth so as to capture the heterogeneity of services (four service sub-sectors and twelve branches) and a broader set of determinants. The study confirms that GDP per capita was the strongest explanatory factor for services employment growth in the EU15 in the period 1970-2001 and this is valid for

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42 D'Agostino et al. quote a number of studies on European labour markets, which have identified a significant effect of labour market institutions – such as the generosity of the unemployment benefits systems, the employment protection legislation, the degree of unionisation (2006, 11).

all service sub-sectors and branches as well. Productivity growth differentials between services and manufacturing also affect employment growth in services, however to a much lesser extent than government consumption. Beyond these three core variables, D'Agostino finds that a number of labour market institutions exert significant effect on services employment (union density, employment protection legislation, wage bargaining centralisation). Similarly, vacancies to unemployment ratio and skill level of labour force significantly influence services employment share, particularly in producer services (D'Agostino et al., 2006, 20).

In the former socialist economies, the analyses of the tertiarisation process and employment restructuring since early 1990s paid little attention to empirical investigation of the determinants of services employment growth. The analyses exploring the drivers of structural change towards services in NMS argue that the overall growth of the service sector during the transition could be attributed to a combination of factors: market-oriented reforms (privatization, regulatory reform, liberalization), institutional change, per capita growth, technological modernization and related adjustment of industrial production and business processes, organizational change towards the externalization of non-core services, increased intermediate demand for services, growth of consumer demand for services reflecting both large shortage in this field in the past and increased incomes (Mickiewicz; Zalewska 2002, Vidovic, 2002).

As the focus of our analysis is to investigate a broader set of factors that influenced the growth of services employment, we refer to Mickiewicz and Zalewska, who studied the factors underlying the adjustment of employment structure in transition economies<sup>43</sup> to the patterns in more advanced countries. Apart from per capita income, they included variation in current levels of economic activity, foreign trade intensity and the efficiency of reforms (approximated by EBRD transition index) as explanatory factors. Their empirical analysis confirms statistically significant influence of GDP per capita on services employment and positive influence of reforms, which is, however, only marginally insignificant (Mickiewicz; Zalewska 2002, 23). They suggest that the countries which followed an inconsistent approach to market reforms are characterised by a big slump of GDP, deep deindustrialisation and a larger share of agriculture in total employment. On the other hand, the higher the quality of reforms the deeper is the structural adjustment towards more efficient labour allocation, where the service sector grows and the agricultural sector shrinks (Mickiewicz; Zalewska 2002, 28-29). To the best of our knowledge, their econometrical analysis is one of the few that attempted to explore the determinants of shifts in employment structure in transition economies,

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<sup>43</sup> Their analysis includes NMS, candidate countries as well as some CIS countries. Differences in the development level of those countries and in the implementation of market reforms are much larger than among NMS.

although it remains severely limited by short data series (1998-2000). We apply a similar econometric approach to NMS data series for the period 1995-2007 and broaden the scope of explanatory variables of employment growth in major categories of services.

## 4.2. METHODOLOGICAL APPROACH AND DATA

For the purpose of our analysis, the distinction was made between two categorizations of services: a) private and public services; b) private, public and mixed services. Private services are characterised by competitive markets, while public services are heavily regulated and predominantly financed by public funds. Mixed services are described as those services that are supplied by private companies and/or public institutions, involve public funds, and are heavily regulated. In mixed services, non-competitive market areas coexist with competitive ones (for example post and telecommunications; for a complete range of mixed services see Table 3).

A number of analyses have confirmed that overall progress in services employment can be sufficiently explained by the growth of GDP/per capita. The growth of individual service industries employment might be, however, significantly determined by other factors as well. In NMS the peculiarities of the system transformation may have also played a role. The analysis of the principal determinants of employment growth in NMS in public, private and mixed services aims to capture those impacts as well. It is carried out on the basis of an econometric analysis using available panel data for NMS in the period 1995-2007. We estimate the influence of different explanatory variables on the structural shift towards increasing share of employment in services in general, and disaggregated to public, private and mixed services. The impact of standard determinants of service employment growth, such as GDP/per capita, technological change (approximated by productivity differences between manufacturing and services), and public sector expenditures will be complemented by testing for the impact of transition reforms (approximated by transition index of EBRD) and changes in governance (WB governance indicator).

### 4.2.1. The model

In order to study the impact of macroeconomic and institutional factors on the service sector employment share, we estimate a simple panel data model for an unbalanced sample of ten NMS (former socialist countries that entered the EU in 2004 and 2007),<sup>44</sup> in the period from 1995 to 2007 (depending on the specification). We consider the following pooled regression model:

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<sup>44</sup> Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, Slovenia and Romania were considered. D'Agostino et al. (2006) estimated similar model for EU15.

$$y_{it} = c + \beta x_{it} + u_{it} \quad i=1 \dots N \quad t=1 \dots T_i \quad (1)$$

$$u_{it} = \alpha_i + \varepsilon_{it} \quad (2)$$

where  $\varepsilon_{it}$  is assumed to be normally distributed, and such that

$$\begin{aligned} E(\varepsilon_{it}) &= E(\alpha_i) = 0 \\ E(\varepsilon_{it}^2) &= \sigma^2 \quad E(\alpha_i^2) = \sigma_{\alpha}^2 \quad E(\alpha_i \varepsilon_{jt}) = 0 \quad \text{Y } i, j, t \\ E(\varepsilon_{it} \varepsilon_{js}) &= 0 \quad \text{if } t \neq s \quad \text{or} \quad i \neq j \\ E(\alpha_i \alpha_j) &= 0 \text{ if } i \neq j. \end{aligned}$$

$N$  is the number of countries (up to 10 countries) and  $T_i$  is the sample length in country  $i$ . The left hand side variable  $y_{it}$  is the  $((T_1 + \dots + T_N) \times 1)$  vector of service employment shares, while  $x_{it}$  is the  $((T_1 + \dots + T_N) \times K)$  matrix of macroeconomic and institutional determinants. Furthermore, the fixed effect  $\alpha_i$  is assumed to be randomly distributed across the cross-sectional units.

#### 4.2.2. Description of variables

Services employment share –  $(y_{it})$  is firstly observed for total services and two sub-categories: public and private services and secondly for three sub-categories - public, private and mixed services.<sup>45</sup> Explanatory variables include:

- GDP/per capita in PPP, in some specifications Hodrick-Prescott Filter<sup>46</sup> (HP filter) is used to control the cyclical component and eliminate the impact of short run fluctuations in time series;
- employment rate,<sup>47</sup> unemployment rate;
- productivity differences between manufacturing and services (labour productivity in services relatively to average labour productivity in manufacturing);
- relative share of public sector in government expenditure;
- FDI inflows;
- EBRD transition index; second stage transition indicators (EBRDTI);
- WB governance index (WBGI).

<sup>45</sup> Estimations of individual services industries (2-digit NACE) were also performed within each category of services. Since the results did not change the significance of the studied determinants within the category, they are not discussed further. Nevertheless, some specifications for individual services (for example industries G, J, L, M, N) improved the results of previous estimations for private, public or mixed services.

<sup>46</sup> According to Schlicht's proposal (2004) we set  $\lambda$  to 100 for annual data.

<sup>47</sup> Employment rate is used to check for country specific differences in the business cycle (Peneder, 2003).

Missing data and limited time series for some countries and years required interpolation or imputation but allowed cross-section analysis using unbalanced panel (see Appendix, Box 1 on data sources).

### Box A1: Data description - definition and data sources

**Services employment share:** The share of employees in public, private and mixed services in total number of employees, for each year of 1995-2007 period. EU KLEMS database ([www.euklems.net](http://www.euklems.net)), for 2006 and 2007 extension of series with annual growth rate by Eurostat; Data for Bulgaria and Romania from Eurostat data base. Log values.

- **GDP per capita** in PPP in million USD for each year of 1995-2007 period, taken from WDI data base (World Bank)

Hodrick-Prescott (HP) Filter is used to eliminate the cyclical component in time series, yet no additional insight was gained by filtration.

- **Productivity differences**, value added per employee in services (for each of the studied category, two digit disaggregation) in relation to the average value added per employee in manufacturing EU KLEMS database.

- **Percentage of public sector expenditure;** total Government finance statistics – WDI data base (World Bank).

- **FDI inflows** from WDI (World Bank), BOP approach.

- **EDBR transition index:** Second and third phase reforms indicator is used based on the average value of six selected indicators: (i) Large-scale privatization, (ii) Enterprise restructuring, (iii) Competition Policy, (iv) Banking reform and interest rate liberalization, (v) Securities markets & non-bank financial institutions, (vi) Overall infrastructure reform.

- **WB governance index** available from 1996-2007 (World Bank), linear interpolation was used for the missing years (1997, 1999 and 2001) Average ranking based on (i) Voice and Accountability, (ii) Political Stability, (iii) Government Effectiveness (iv) Regulatory Quality (v) Rule of Law, (vi) Control of Corruption.

- **Employment rate / Unemployment rate:** share of employed in total population / share of unemployed in active population; ILO statistical service.

For some countries and years, we had to impute missing values by linear interpolation to give a balanced panel. All macroeconomic variables are taken as logarithm of values.

## 4.3. EMPIRICAL ANALYSIS

Estimation was carried out sequentially. It was started by estimating a core model, which includes basic macroeconomic determinants, and then other potentially relevant macroeconomic and institutional determinants reflecting the transition were added. Sequential adding of explanatory variables has revealed interrelation of macroeconomic and institutional variables. GDP per capita is highly correlated with both EBRD transition index ( $R^2=0.57$ ) and WB governance index (0.69). This confirms that major employment shifts towards services in the former centrally-planned economies reflect both the macroeconomic and institutional determinants and require special attention in interpreting services development.<sup>48</sup>

### 4.3.1. Understanding services heterogeneity

Previous studies of the determinants of increasing share of services employment that have focused on developed or developing economies point to a significant and stable impact of three major factors: GDP per capita, productivity gap and government expenditure for public services (D'Agostino et al, 2006, Messina 2004, Russo and Schettkat, 2001, OECD, 2000). When compared to these results, our estimations for ten NMS could appear somewhat surprising at first sight (see Table 7). Productivity gap is found the most important and significant determinant of services sector employment across all specifications. Lower productivity of services relative to manufacturing (increasing differences) is associated with a higher services employment share (thus negative coefficient value). Contrary to our expectations and to results of other studies, GDP per capita does not show a positive impact on total services employment share and does not improve significance even when smoothed by Hodrick-Prescott filter.<sup>49</sup> Similar observations relate to the role of public expenditure, which seems unimportant for the expansion of services employment. The reasons for such outcomes are assumed to be manifold and are dealt with when explaining the employment growth in disaggregated categories of services.

Other macroeconomic variables – FDI inflow and unemployment rate – bring no significant change. In most of specifications<sup>50</sup> the unemployment rate is not a significant determinant of services employment. Interestingly, the expansion of the specification reveals that FDI impact is significantly negative for total services employment (and also for public services, but insignificant for private services).

<sup>48</sup> See also Eschenbach and Hoekman (2006).

<sup>49</sup> D'Agostino et al. (2006), who analysed the developments in EU15, however, finds significant and strong positive correlation after adjusted for the cyclical effect. While D'Agostino uses Hodrick-Prescott filter as separate variable, we applied the smoothing parameter on basic variables (using Stata option).

<sup>50</sup> Except for public services 1 in Table 8.

Even though market services attracted a substantial amount of FDI (most notably financial services, wholesale and retail trade and business services), it could be assumed that foreign ownership did not contribute as much to the expansion of employment in these services as it did to modernisation of the organisational processes and more intensive use of ICT. Indeed, the evidence of the effects of FDI inflows in transition economies shows both productivity increase and employment growth along with restructuring.<sup>51</sup>

**Table 7: Determinants of employment in services, public services and private services**

	TOTAL SERVICES			PUBLIC SERVICES			PRIVATE SERVICES		
	Coef.	Std. Err.	t	Coef.	Std. Err.	t	Coef.	Std. Err.	t
<b>Ingdpcc</b>	0.0039	0.0060	0.65	<b>-0.0184</b>	0.0063	-2.92	<b>0.0203</b>	0.0097	<b>2.1</b>
<b>Inrel_prod</b>	<b>-0.0054</b>	0.0021	-2.6	<b>-0.0130</b>	0.0024	-5.37	-0.0065	0.0041	<b>-1.59</b>
<b>Ingovexp</b>	0.0081	0.0102	0.79	0.0104	0.0112	0.93	0.0064	0.0161	<b>0.4</b>
<b>Inunempl.</b>	0.0045	0.0039	1.16	0.0045	0.0042	1.09	0.0038	0.0062	<b>0.61</b>
<b>InFDI</b>	<b>-0.0045</b>	0.0017	-2.74	<b>-0.0040</b>	0.0018	-2.3	-0.0039	0.0026	<b>-1.46</b>
<b>EBRDti</b>	<b>0.0227</b>	0.0074	3.06	<b>0.0293</b>	0.0078	3.76	0.0122	0.0119	<b>1.03</b>
<b>WBGI</b>	<b>-0.0011</b>	0.0004	-3.12	<b>-0.0007</b>	0.0004	-1.91	<b>-0.0011</b>	0.0006	<b>-2.01</b>
<b>cons</b>	<b>0.0949</b>	0.0531	1.79	0.2308	0.0557	4.15	-0.0266	0.0872	<b>-0.3</b>
<b>N</b>	887			412			475		
<b>F</b>	422			11.63			1.61		
<b>R<sup>2</sup></b>	0.0325			0.1677			0.0235		
<b>Adj. R<sup>2</sup></b>	0.0248			0.1532			0.0286		

Note: Bolded values: significant at 5%.

Source: Own calculations of regressions for total and two sub-groups of services based on EU KLEMS, Eurostat, World Development Indicators (World Bank 2009a) , ILO, WIIW, Worldwide Governance Indicators (World Bank 2009b).

51 See for example Hunya, 2000; Rojec, 1998.

**Table 8: Determinants of employment in public, mixed and private services**

	PUBLIC SERVICES 1			MIXED SERVICES			PRIVATE SERVICES 1		
	Coef.	Std. Err.	t	Coef.	Std. Err.	t	Coef.	Std. Err.	t
<b>Ingdpcc</b>	-0.0031	0.0024	-1.3	<b>-0.0192</b>	0.0053	-3.64	<b>0.0214</b>	0.0087	<b>2.47</b>
<b>Inrel_prod</b>	<b>0.0088</b>	0.0031	2.86	<b>-0.0247</b>	0.0018	-13.73	-0.0030	0.0029	<b>-1.03</b>
<b>Ingovexp</b>	<b>0.0064*</b>	0.0036	1.74	0.0026	0.0092	0.28	-0.0065	0.0146	<b>-0.44</b>
<b>Inunempl.</b>	<b>0.0029</b>	0.0014	2	0.0017	0.0035	0.5	0.0024	0.0057	<b>0.42</b>
<b>InFDI</b>	<b>0.0011*</b>	0.0006	1.74	-0.0023	0.0014	-1.59	-0.0023	0.0024	<b>-0.98</b>
<b>EBRDti</b>	<b>0.0189</b>	0.0028	6.81	<b>0.0196</b>	0.0065	3.03	0.0068	0.0108	<b>0.63</b>
<b>WBGI</b>	<b>-0.0008</b>	0.0001	-5.46	-0.0003	0.0003	-1.1	<b>-0.0010</b>	0.0005	<b>-1.87</b>
<b>cons</b>	<b>0.0460</b>	0.0201	2.29	<b>0.2279</b>	0.0463	4.92	-0.0430	0.0782	<b>-0.55</b>
<b>N</b>	95			497			647		
<b>F</b>	29.72			33.22			1.34		
<b>R<sup>2</sup></b>	0.7051			0.3223			0.0145		
<b>Adj. -R<sup>2</sup></b>	0.6814			0.3126			0,0037		

Note: Bolded values: significant at 5%, \* 8 % significance

**Public services 1** –Public administration and defence; **Mixed services** - Education, Health and social work, Other community, social and personal services, Post and telecommunications, Inland transport; **Private services 1** - Distributive trades, Hotels and restaurants, Water & Air Transport, Financial services, Real estate, renting and business services.

Source: Own calculations of regressions for three sub-groups of services based on EU KLEMS, Eurostat, World Development Indicators (World Bank 2009a), ILO, WIIW, Worldwide Governance Indicators (World Bank 2009b).

Adding the institutional determinants of employment growth in services approximated by EBRD transition index and WB governance indicator slightly improves the explanatory power of the previous specifications and confirms significant impact.<sup>52</sup> While EBRD transition index positively influences total services employment, WB governance index reveals significant negative impact on total services employment share.

### 4.3.2. Distinguishing between public and private services

Heterogeneity of services calls for a more disaggregated analysis of employment determinants in services, which could enable better evaluation of the impact of various factors on public and private services employment change. Separate estimations for public and private services (Table 7) reveal differences between these two categories and significantly improve the explanatory power of the model (see

52 R<sup>2</sup> increases from 0.0148 to 0.0325.

the increase in  $R^2$ ). Distinguishing between private and public services reveals the significant impact of GDP per capita growth, which is of particular relevance. In private services, the impact of GDP per capita on employment share is significantly positive, while the impact is the opposite in public services. Although the negative sign of income determinant for public services employment might be to some extent surprising, it is, however, in line with the findings in chapter 3, subchapter 3.2. When adjusted for the level of development (using GDP per capita benchmarks), NMS had on average a disproportionately large share of employment in public services at the outset of reforms. As a consequence, the convergence process in public services employment toward the benchmark value for countries at a similar level of development occurred top-down, which was contrary to private services with bottom up convergence evolution. This may suggest that public services employment experienced a slower growth than per capita income affecting the negative sign of GDP coefficient. It is very likely that superfluous employment in public services in NMS produced an insignificant effect of public expenditure on employment share in public services. Moreover, public expenditures are not found to be a significant determinant for any service subgroup, except for public administration.

In an expanded model for public services, EBRD transition index is the most important factor, followed by GDP per capita. The productivity gap remains a significant determinant and increases in importance compared to its effect on the total services employment. Though both sets of institutional determinants proved significant, the second phase transition reforms (EBRDTI) played a much greater role than improvements in governance (WBGI). The latter even demonstrate a negative sign and need to be interpreted very cautiously, taking into account some methodological peculiarities. The relative improvement in the rankings of countries captured in WBGI does not necessarily reflect a *de facto* improvement of governance for an individual country, due to various changes in methodology and variations in a number of countries included in the ranking.<sup>53</sup>

The assessment of explanatory variables for private services employment reveals GDP per capita as the most important determinant with significant and positive impact on employment share (Table 7). The only other significant determinant of private services employment is WBGI,<sup>54</sup> which again shows a negative impact on employment share, while all other determinants are insignificant.<sup>55</sup> Investigation

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<sup>53</sup> As the correlation between both institutional indicators (EBRDTI and WBGI) is strongly positive (0.676), the negative sign of coefficient for governance index is especially surprising and difficult to explain.

<sup>54</sup> Disaggregated analysis by individual industries confirms a significant positive impact of WBGI only for sector G (Table 10).

<sup>55</sup> Productivity gap is significant in the core model without institutional determinants. When these are included into specification, the productivity gap loses significance.

of individual private service industries shows that deviations from theoretical expectations are the smallest for wholesale trade (G) and financial services (J). Transition-specific indicators do not show significant influence on employment growth in private services, except in distributive trades.

### **4.3.3. Understanding the difference between public, private and mixed services**

From the perspective of the objectives of the analysis, it is important to further disaggregate services to reflect the mixed character of some services which are supplied by both private and public providers. Accordingly, Table 8 shows the results for three categories of services: public (public services1), private (private services1) and mixed services. Here, public services1 are limited to public administration and defence, while mixed services comprise education, health, other community services, post and telecommunication, inland transport. Private services1 only slightly differ from the previous private services category, hence the estimations remain very similar. The impact of various determinants again differs substantially among the three categories. Differences could also be identified within these three groups. Results for individual services industries are presented in Table A9 and Table 10.

GDP per capita seems to be irrelevant for (public services1) employment, but relevant for both other categories of services. As demonstrated in Table 9 GDP plays significant and negative impact for employment share for all mixed services. Among market services GDP is found as significant positive incentive for employment share in wholesale and retail trade and financial intermediation. All other determinants have a significant impact on public service1 employment, with EBRD transition index as the most influential. This could be explained by institutional changes that required new employment in public administration and were triggered off both by transition reforms and the accession process to the EU. Productivity gap is significant, but shows the reverse impact, indicating a decreasing employment share in public administration with a rising productivity difference. Following Baumol's argumentation, public administration (public services 1) is not expected to attract additional employment (Baumol, 2001). Government expenditures contribute positively to public administration employment (at 8% significance). WB Governance Index again confirms a significant negative impact on the employment share of public administration.

Mixed services employment appears to be the most affected by productivity differences.<sup>56</sup> The larger the productivity difference between manufacturing and

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56 Productivity differences were a more important determinant for health and social work than for education or other community, social and personal services (see Table 9).

services, the lower the increase in employment share. In line with previous findings significant and negative impact of GDP per capita is relevant for mixed services as they capture a bulk of broadly-defined public services. Negative impact was found for each individual mixed service: education, health and social work, other community and personal services and post and telecommunications. The over-employment in the past may thus primarily be a problem of mixed services, which went through restructuring during transition. Along with GDP growth, these sectors (particularly education, health and social services) face modest competition, weak internationalization and consequently, slower restructuring process in NMS. The pressure to increase the efficiency in these services (that were in transition economies traditionally offered exclusively by public sector) is mirrored in a slow employment growth. Restrictions to employment growth by public providers of services (often set due to budgetary constraints), limited competition and persistent regulation for private suppliers could offer additional explanation for a negative correlation between GDP growth and mixed services employment share, in addition to already observed over-employment at the start of the transition process.

Among the three groups of services, mixed services are the most sensitive to transition reforms, where deregulation in infrastructure (including telecommunications) could have an important effect. An insight into transition-specific determinants of employment growth in individual mixed services also reveals important differences (for example, second-stage and third-stage transition reforms reduced employment in health and social work, but increased employment in post and telecommunications, see Table 9). Overall infrastructure reform and competition policy are on average the weakest parts of the transition reforms captured in the second and third-stage EBRD indicators<sup>57</sup> and leave room for further improvements, while large-scale privatization, banking and interest rate liberalization contributed the most to transition index record.

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57 EBRD second and third-stage transition index includes the average of the following indicators: (i) Large scale privatization, (ii) Enterprise restructuring, (iii) Competition Policy, (iv) Banking reform and interest rate liberalization, (v) Securities markets and non-bank financial institutions and (vi) Overall infrastructure reform.

Table 9: Determinants of employment in mixed services

	Education				Health and social work				Other community, social and personal services				Post and telecommunications			
	Coef.	Std. Err.	t	Coef.	Std. Err.	t	Coef.	Std. Err.	t	Coef.	Std. Err.	t	Coef.	Std. Err.	t	
<b>Ingdpcc</b>	<b>-0.02152</b>	<b>.0058071</b>	<b>-3.71</b>	<b>-0.02152</b>	<b>.0058071</b>	<b>-3.71</b>	<b>-0.02152</b>	<b>.0058071</b>	<b>-3.71</b>	<b>-0.009732</b>	<b>.0009377</b>	<b>-10.38</b>				
<b>Inrel_prod</b>	<b>-0.015207</b>	<b>.0060318</b>	<b>-2.52</b>	<b>-0.015207</b>	<b>.0060318</b>	<b>-2.52</b>	<b>-0.015207</b>	<b>.0060318</b>	<b>-2.52</b>	<b>-0.002729</b>	<b>.0009293</b>	<b>-2.94</b>				
<b>Ingovexp</b>	<b>-0.034055</b>	<b>.009471</b>	<b>-3.60</b>	<b>-0.034055</b>	<b>.009471</b>	<b>-3.60</b>	<b>-0.034055</b>	<b>.009471</b>	<b>-3.60</b>	<b>.000599</b>	<b>.0015927</b>	<b>0.38</b>				
<b>Inunempl.</b>	<b>.00786</b>	<b>.0040035</b>	<b>1.96</b>	<b>.00786</b>	<b>.0040035</b>	<b>1.96</b>	<b>.00786</b>	<b>.0040035</b>	<b>1.96</b>	<b>-0.001156</b>	<b>.0006276</b>	<b>-1.84</b>				
<b>InFDI</b>	<b>-0.002964*</b>	<b>.0016546</b>	<b>-1.79</b>	<b>-0.002964*</b>	<b>.0016546</b>	<b>-1.79</b>	<b>-0.002964*</b>	<b>.0016546</b>	<b>-1.79</b>	<b>-0.000777</b>	<b>.0002611</b>	<b>-2.96</b>				
<b>EBRDTi</b>	<b>.012134</b>	<b>.0077205</b>	<b>1.57</b>	<b>.012134</b>	<b>.0077205</b>	<b>1.57</b>	<b>.012134</b>	<b>.0077205</b>	<b>1.57</b>	<b>.0084479</b>	<b>.0011713</b>	<b>7.21</b>				
<b>WBGI</b>	<b>-0.000279</b>	<b>.0004018</b>	<b>-0.69</b>	<b>-0.000279</b>	<b>.0004018</b>	<b>-0.69</b>	<b>-0.000279</b>	<b>.0004018</b>	<b>-0.69</b>	<b>.0001256</b>	<b>.0000577</b>	<b>2.18</b>				
<b>cons</b>	<b>.442579</b>	<b>.0502113</b>	<b>8.81</b>	<b>.442579</b>	<b>.0502113</b>	<b>8.81</b>	<b>.442579</b>	<b>.0502113</b>	<b>8.81</b>	<b>.0931331</b>	<b>.0086976</b>	<b>10.71</b>				
<b>N</b>	<b>95</b>			<b>95</b>			<b>84</b>			<b>90</b>						
<b>F</b>	<b>18.60</b>			<b>16.39</b>			<b>37.51</b>			<b>27.65</b>						
<b>R<sup>2</sup></b>	<b>0.5937</b>			<b>0.5687</b>			<b>0.7778</b>			<b>0.7024</b>						
<b>Adj.-R<sup>2</sup></b>	<b>0.5610</b>			<b>0.5340</b>			<b>0.7571</b>			<b>0.6770</b>						

Note: Education (M), Health and social work (N), Other community, social and personal services (O), post and telecommunications (P), private households with employed persons (P) are not presented due to small sample number N= 44 units.

Source: Own calculations of regressions for four sub-groups of mixed services based on EU KLEMS, Eurostat, World Development Indicators (World Bank 2009a), ILO, WIIW, Worldwide Governance Indicators (World Bank 2009b).

Table 10: Determinants of employment in private services

	Wholesale and retail trade				Hotels and restaurants				Financial intermediation				Real estate, renting and business activities			
	Coef.	Std. Err.	t	Coef.	Std. Err.	t	Coef.	Std. Err.	t	Coef.	Std. Err.	t	Coef.	Std. Err.	t	
Ingdpcc	.022819	.0056672	4.03	.0027258	.001459	1.87	.011529	.0030638	3.76	.0100663	.0093194	1.08				
Inrel_prod	.008455	.006224	1.36	-.012355	.0016943	-7.29	-.007067	.0021344	-3.31	-.0595763	.0051107	-11.66				
Ingovexp	-.028968	.0097285	-2.98	.008994	.0025491	3.53	.0053489	.004924	1.09	.0188835	.0105886	1.78				
Inunempl.	-.001258	.0034491	-0.36	-.003793	.000973	-3.90	.00446083	.0021113	2.18	.0102958	.004308	2.39				
InFDI	-.004702	.0015944	-2.95	-.000377	.000453	-0.83	.0003961	.0007576	0.52	-.003572	.0017611	-2.03				
EBRDTi	.017688	.0068677	2.58	.000162	.0023435	0.07	-.003865	.0034514	-1.12	.0112871	.0077685	1.45				
WBGI	-.001893	.0003168	-5.98	.0000579	.0000966	5.94	-.000151	.0001651	-0.92	.0005917	.0004843	1.22				
cons	.214924	.052994	4.06	-.062069	.0128853	-4.82	-.097101	.0313286	-3.10	-.0660216	.0740514	-0.89				
N	95			95			95			95						
F	10.74			52.91			11.39			56.56						
R <sup>2</sup>	0.4636			0.8098			0.4781			0.8198						
Adj. -R <sup>2</sup>	0.4205			0.7945			0.4361			0.8054						

Note: wholesale and retail trade (G), hotels and restaurants (H), financial intermediation (I), real estate, renting and business activities (K).

Source: Own calculations of regressions for three sub-groups of services based on EU KLEMS, Eurostat, World Development Indicators (World Bank 2009a), ILO, WIW, Worldwide Governance Indicators (World Bank 2009b).

#### 4.3.4. Difficulties in explaining services growth in NMS

The estimations of explanatory variables of employment growth in three differentiated categories of services reflect heterogeneity of services and bring some further insight into the investigation of explanatory variables of services employment share. In particular, they reveal that the transformation of mixed services is the most transition specific. It deviates from theoretical expectations and patterns in developed economies in regard to income growth impact. The indicators of transition reforms and respective institutional changes have a statistically significant effect on employment growth in public administration and in mixed services, while they are much less relevant for private services. In spite of some inconsistencies among various specifications of the model, the results robustly show that determinants for private services employment are more similar to those valid for developed economies. Lower explanatory power of specification for private services, however, calls for additional determinants that may provide more refined results.

Differences in the role of GDP per capita in various subsets of services employment share require further research. One of the reasons of the poor explanatory power of macroeconomic determinants in general may lie in a shadow informal economy, which is estimated to have a much larger weight in transition economies than in developed economies (Schneider, 2002). In 2001/2002 the average size of the shadow economy amounted to 16.7% of “official” GDP in 21 OECD countries and to 38.0% in 22 transition countries. According to International Labour Organization (ILO, 2002) the bulk of new employment in recent years, particularly in transition economies and in services has been in informal economy. There has also been increasing flexibilization and informatization of production and employment relationships in the context of global competition and ICT, resulting in rapidly internationalized and diversified value chains and expansion of outsourcing. Rigid labour regulation and less flexible working places additionally increase informal employment.<sup>58</sup> The average size of the shadow economy labour force (in percent of the working age population) in 1998/99 was estimated at 15.3% in seven OECD countries and 30.2% in 22 transition countries. An increasing burden of taxation and social security contributions coupled with rising state regulatory activities have been the driving forces of growth and size of informal economy labour force. While shadow/informal economy might be indirectly (and with a time lag) reflected in the value added and GDP, services employment data might be persistently underestimated (downward biased).<sup>59</sup>

58 ILO. Decent work and the informal economy. Report VI. International Labor Conference 2002. ILO [http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---webdev/documents/meetingdocument/wcms\\_069040.pdf](http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---webdev/documents/meetingdocument/wcms_069040.pdf)

59 For example in retailing, cleaning, catering, etc.

Overall, the empirical analysis and the discussion of results reveal an important influence of the transition process on the determinants of services employment in NMS in the period 1995-2007. Nevertheless, the findings on some variables should be understood as inconclusive and only preliminary due to various reasons, such as data deficiency, particularly short-time series and large amount of missing data. Further, the present study includes only 10 NMS while a broader set of transition economies could increase variations among countries and also enable better insight into the transition specific determinants. On the other hand, the comparison with EU27 or OECD countries in disaggregated service industries could improve the understanding of traditional macroeconomic variables in NMS. We may also assume that inconsistent results for the explanatory power of productivity differences in the case of private services are related to the problems in measuring services output, which are even more relevant in transition economies. Further, it has been pointed out that on average 30% of market services output is deflated by unacceptable or biased methods; the share is the biggest in business services and financial intermediation,<sup>60</sup> while in hotels and restaurants it is rather limited. Variations across countries are even larger (Inklaar et al., 2008). The areas proposed for further analysis (e.g. shadow/informal economy, improvements in productivity measures, increased number of countries in the sample, longer data series) may in the future lead to more conclusive results concerning the determinants of services employment in NMS. In any case, the observed differences in determinants of services employment among sub-sets of services in NMS call for a disaggregated analysis.

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60 Nearly a half of output, suggesting that measured trends could not accurately reflect the actual developments in prices and quantities.

## 5. CHALLENGES OF SERVICES DEVELOPMENT AND SERVICES EMPLOYMENT IN NMS

Since the launching of market reforms, the transition economies have seen considerable structural changes. The service sector in particular underwent rapid transformation, as it used to be largely neglected under the previous socio-economic system when most services were provided by the public (state) sector or internalised in large manufacturing companies. With the change of the political system and particularly with the introduction of market mechanisms, private suppliers of services in the NMS experienced a rapid growth driven by privatization, liberalization and deregulation of the economy. New services, not available in the past, were introduced by local and foreign suppliers. Gradually, the supply and range of services provided to final and intermediate consumers increased. Public services grew much slower than private services, since the former accounted for a high share of total employment relative to income level already at the outset of the reforms.

These stylized facts were confirmed by our empirical investigation, which shows that NMS have in the period 1995-2005 importantly narrowed the gap in services employment relative to the EU15. The catching up process differed substantially across countries and so did the trajectories of the two groups of service activities, owing to different starting positions and the efficiency in implementing the reforms. However, NMS still lag significantly behind the EU15 in private and public services development, with Romania and Bulgaria experiencing particularly large gaps. In the period 1995-2005, the NMS employment in private services accelerated faster than in public services with the legacy of huge over-employment at the outset of reforms. The convergence analysis supports more rapid catching-up of NMS towards advanced EU economies in private services than in public services. At the same time, the convergence in private services seems to have accelerated in the period 2000-2005, which is most likely related to the implementation of reforms prior to the accession.

### 5.1 VARIETY OF CATCHING UP PATTERNS: TOP-DOWN AND BOTTOM-UP

The convergence analysis of the NMS was complemented with the Chenery-type benchmark analysis of employment shares in public and private services for a given level of development, based on the data for market economies. In the period 1995-2005, the NMS employment shares in public and private services converged

to the reference level of market economies, however, the patterns of individual countries differ considerably. Only Slovakia, Latvia and Romania substantially narrowed the gap to the reference point in private services by 2005, while Estonia, Lithuania, and Slovenia slightly increased it. In contrast to the bottom-up trajectory of private services, the evolution of public services employment in the NMS towards the benchmark could largely be denoted as top-down. In 1995, all NMS with the exception of Romania, Slovenia, and Czech Republic recorded higher share of public services employment than would have been expected from their income level. Even though the actual employment shares in public services in all NMS were and remain below the EU15 average, adjusted for the level of development, Baltic States and Hungary maintained a disproportionately large share of employees in public services also in 2005. Finally, the comparison of the employment levels of public and private services in 2005 shows that the gap of the NMS behind the EU15 remains larger in private services than in public services, suggesting that a longer period of time is needed to adjust private services to market economies benchmarks and that structural transformation is far from complete.

The preliminary examination of the qualitative elements of private and public services' transformation in the NMS indicates that despite notable improvement in productivity, value added per employee in private services remains below 50% of the average EU15 productivity, with Cyprus, Slovenia and Malta being the notable exceptions. However, these results should be interpreted with caution, because of methodological inconsistencies and data deficiency in measuring value added and comparisons across countries. The performance in public services based on the selected indicators converged to the EU15 average, mainly due to good starting conditions. In the period 1995-2005, the majority of the NMS improved the performance of public services relative to the EU15 average, while four NMS have deteriorated it. In view of the achieved progress in employment structure and a large gap in private services productivity, the challenge for NMS remains how to simultaneously boost employment and efficiency in private services, while curbing employment in public services without jeopardising their performance. It is becoming evident that more profound changes are needed to dismantle the legacy of over-employment in the public services. These refer to re-defining the role of public services in economy, increasing their responsiveness to the demands of other institutional sectors and citizens, introducing the accountability of public service providers for the quality of services and improving the efficiency of public services. Given the aggravation of budget positions with the ongoing crisis, the analysis of efficiency in public services spending appears to be an important issue of further research in most countries.

## 5.2. TRANSITION MATTERS AND INCREASES SERVICES HETEROGENITY

In order to complement the convergence and benchmarking analysis of public and private services employment in NMS, the econometric analysis of the main determinants of services growth has also been made. Based on the findings of the studies for developed market economies, we expected that a similar set of major determinants could substantially explain the growing share of services employment in NMS. Besides, we attempted to test the validity of transition-related explanatory variables (FDI inflows, transition reforms indicator and governance indicator) resulting from the major changes in regulatory framework and institutional set up triggered off by market-oriented reforms. The estimation of determinants of services employment growth in NMS in the period 1995-2007 brings about somewhat surprising results. Basically, it turns out that GDP per capita and government expenditure fail to explain the increasing share of services employment in NMS, while only the productivity gap between services and manufacturing appears to be a statistically significant determinant. Besides, transition reforms exert statistically significant influence and slightly improve the explanatory power of previous specifications. Although some of the above results are unexpected in the framework of stylized facts on structural change, they earn more credibility when perceived through the lens of the convergence patterns in two major service groups. Here, specifically the over-employment in public services in these countries at the start of the transition needs to be mentioned and hence their disproportionate share in total employment relative to income level. Taking into account this feature, it becomes more plausible that income growth per se could not reveal positive impact on public services employment share. In fact, its impact was negative and statistically significant, which may have resulted in a poor explanatory power of GDP per capita for total services employment. However, this was the most important determinant of the increasing share of private services employment in NMS in the period 1995-2007.

Distinction among public, private and mixed services provided some further insight into the explanatory determinants of services employment share. In particular, it reveals that the transformation of mixed services is most transition specific. These services show deviations from the theoretical expectations and patterns in developed economies in regard to income growth impact, as the coefficient is significantly negative. The indicators of transition reforms and institutional change are more relevant for public administration and mixed services than for private services. While transition reforms and EU accession speeded up convergence in public administration, they appear to be insufficient for catching up of employment in market services, where NMS experience the largest lag behind old member states. These findings do not suggest that standard explanations of services growth and stylized facts of structural changes are not valid for NMS. All in all, the results based on available data rather indicate that the transition

process and related features disrupt the explanatory power of standard variables for services growth in NMS. Disaggregation of results for service sub-sectors indicates that past development could be the most probable explanation of such an outcome. However, a caveat applies to deficient data and short time period, which may have considerably influenced the results and should be interpreted with caution. Refinement of data, longer time series and introduction of additional factors that may have an influence is proposed as a potential extension of research in the future.

### 5.3. SERVICE OUTSOURCING AS A CATALYST FOR PRODUCTIVITY IMPROVEMENTS AND RESTRUCTURING OF PUBLIC AND PRIVATE SERVICES

Possible explanation for relative over-employment in public services on one hand and underdeveloped private services on the other hand may be ascribed to public sector's insufficient use of contracting with outside service providers. Services like security and maintenance of buildings, legal services, sanitary inspection, computer maintenance, information system maintenance, accounting services, recruitment and skills management, are still performed in-house in many public sector firms, agencies and ministries, even though it would sometimes be more efficient to outsource them to an independent provider. In the process of such delegation of activities outside the public sector, there would also be a statistical reallocation of employment from public to private services. Provided that the services outsourced are paid competitive market price, the resulting decline of employment in the public sector could reduce overall operating costs and increase efficiency of public services. Larger employment due to privatization of service provision would increase competition in private services and employ resources more efficiently than before.

In addition to the normative question of what role government should assume in providing services, it has also raised the positive question of what determines government privatization decisions in practice. There are at least two accounts of government privatization decisions. One view, which focuses on transaction costs, looks by analogy to the private sector "make or buy" decision (e.g. Williamson, 1985; Hart, Shleifer and Vishny, 1997). In this account, privatization is dictated by efficiency considerations. An alternative view, advanced by Boycko, Shleifer and Vishny (1996) among others, emphasizes the private benefits to politicians of keeping service provision inside the government. This view holds that privatization tends to occur only in response to external pressure, such as citizen discontent or tight budgets.

Needless to say, service outsourcing is no clear-cut panacea for improvement in employment structure and productivity in NMS' service sector. There

are important trade-offs in every make-or-buy decision that require thorough ex ante comparison between potential benefits (due to cost savings, exploitation of economies of scale, and vendor's specialization) and costs (due to loss of control, higher organizational costs, potential hold-up problems, security issues). Services for which it is more difficult to write and administer performance contracts are less likely to be privatized. The relationship between potential benefits and costs is greater for larger and more urban regions, which presumably have a more readily available pool of external providers. Empirical evidence suggests that large cities make the greatest use of services provided by specialised private suppliers, and are the least likely to rely on in-house services (Levin and Tadelis 2007).

Blank (2000) offers additional arguments conditions for beneficial transfer of services from public sector to private suppliers. The more that one believes measurable standards of quality can be observed in the social service field, the stronger the argument for government regulation of the private sector rather than government management or ownership. The more that one believes that nongovernmental agencies can provide credible signals of quality in a particular market, because of their long-term reputational concerns, or because of the nature of the market, the less the role for government ownership or management. But when standards are difficult to observe or when the recipient is not the agent who makes the decisions, government ownership may be preferable. The importance of the ability to measure and verify the correctness of supplier's services was proven vital in numerous cases.<sup>61</sup>

## 5.4. FOSTERING QUALITY AND INNOVATION IN SERVICES

For consumers, quality of services delivered is of vital concern and this holds especially for public services. However, continuous quality improvements cannot be achieved in the absence of innovation and this is the area where NMS can progress farthest in their catching-up process. Le Grand (2007) lists four distinct models of delivering higher quality and more efficient public services: trust, where managers and employees in public services are trusted by general public to deliver a high quality service efficiently; command and control, where those workers are contractually demanded to perform specific tasks and deliver services; voice, where service consumers continuously convey their views and requirements about the quality of the service directly to service providers; and choice and

<sup>61</sup> One example is British rail infrastructure provider Railtrack and its successor Network Rail that were unable to manage relations with independent suppliers to whom they outsourced maintenance activities through long-term contracts. After a series of railroad accidents, Network Rail decided to gradually insource maintenance activities. Public services providers in NMS as well face similar difficulties.

competition, where users can select the service from the preferred among many service providers.

Each of these models has its virtues and disadvantages and cannot be applied to all situations. The trust approach promotes morale, and since little monitoring is required, is relatively cost efficient. However, it has a major limitation: it assumes that service providers are exclusively motivated by the desire to provide exactly the services that customers need, and that they have no self-interest aspirations. The key benefit of command and control approach is that it is very effective in the short run. Despite its short run efficiency, in the long run targets and performance management suffer from the demoralisation and demotivation of those in charge of service delivery, the distortion of priorities, and the incentive for gaming behaviour of various kinds, ranging from straightforward fiddling of the figures to more subtle ways of meeting the target by changing behaviour in undesirable ways. The voice approach directly acknowledges users' wants and can be rich in useful information. The demerit of the voice approach is that the individual has to depend for a response on the goodwill of the person to whom they are complaining. This is also a delicate mechanism for quality enhancement since it offers little or no direct incentives for improvement to the fraudulent or self-interested professional or manager. Unlike the trust model, the choice and competition approach makes self-interest and altruism to serve the public good. If the money follows the choices of consumers, then the providers of better services will gain resources while those that provide inferior service in terms of quality or price will lose. Unlike the command and control model, it gives freedom and autonomy to professionals and managers, encouraging them to engage in innovation and creativity, and with no outside authority continuously telling them what to do. Unlike voice, in a world where choice and provider competition is the norm, users dissatisfied with the general quality of the service they can get from one provider have the opportunity to go to another who can provide them with a better service. The problem with the choice and competition model is that in some service sector, competition is hard to provide, customer-supplier relationships are fraught by information asymmetries and providers may choose only the users who are cheaper or easier to serve.

Empirical evidence (see Le Grand 2007) shows that in most situations, the best performing services are those whose delivery systems incorporate substantial elements of choice and competition. Properly designed, such systems will deliver services that are of higher quality, more responsive, more efficient, and more innovative than ones that rely primarily upon trust, command-and-control, or voice. In general, services as compared to manufacturing suffer less from the traditional Schumpeterian concern that market power is a prerequisite for innovation. This implies that policy makers should strongly emphasise the general business framework and regulatory reform. NMS should also improve conditions which are conducive to effective entry into the service sector. Only then could consumers benefit fully from competitive forces and increased choice. Regulations need to be

consistent and designed so as not to distort investment decisions and steps taken to remove excessive regulatory burden that gives rise to under-investment, low firm entry rates and inhibited competition. There are various ways in which support of innovation in services other than R&D could be conceived. These include policy measures to support clusters and innovation networks rather than trying to subsidise individual firms. Various institutions and incentive structures could also be put in place to foster continuous life-long learning in service sector firms. Last but not least, through public procurement, government can take on the role of a demanding customer with a view to developing competitiveness in services through innovation. Given the size of the government, including the many different public authorities, public procurement could represent a far more prominent driving force for renewal and innovation in services than is the case at present. Moreover, effective public procurement schemes could alleviate or postpone pressures in NMS to adopt rapid and politically sensitive modernization of public services by means of privatization, public-private partnerships and greater resort to outsourcing.

## 5.4. CONCLUSIONS

Discussion of the patterns of public and private services transformation and growth in the NMS during the period 1995-2007 has revealed some new findings that are relevant also for policy shaping. It is safe to conclude that as much as further progress in private services in the NMS seems urgent from the perspective of catching up and building a globally competitive society, the transformation and modernisation of public sector services are of equal importance, particularly in view of its modest performance and trends towards increased social inequality in some countries. The NMS should move faster in incorporating innovation as a crucial element of strengthening the private services and improving governance of the public services. Exploiting the innovation potential in public services, which has been largely neglected so far, may also trigger off the innovation in private services and enhance the interfaces between the two, to the benefit of both groups of services (e.g. formal and informal networks of public and private services providers). New technologies bring enhanced dynamism into private and public services and enable the introduction of new and more efficient services (e-banking, e-commerce, e-government, e-health, and e-education). Nevertheless, there are other ways in which innovation can contribute to better performance. Policy learning accumulated in the use of innovative undertakings is of major importance and should be incorporated into pro-innovation policy actions (Marroto and Rubalcaba 2008). In doing so and in policy shaping, the NMS should not only imitate more developed EU economies but introduce innovative mechanisms that best suit the absorption capacity of public and private actors and the

broad cultural context of their economy and society. To this end, more emphasis and resources should be assigned to the research of services-related issues, an area hitherto fairly ignored in NMS.

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