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Ekonomiczne Problemy Usług nr 88, 689-697

2012

ZESZYTY NAUKOWE UNIWERSYTETU SZCZECIŃSKIEGO

NR 703 EKONOMICZNE PROBLEMY USŁUG NR 88 2012

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Introduction

Infrastructure sectors are of crucial importance for socio-economic development of countries and this relevance is well recognized in theory as well as in real life. Infrastructures influence socio-economic development from both, supply and demand side. "On the supply side, there is both a direct channel one (infrastructure capital stock serves as a production factor) and an indirect one (improved infrastructure affects technological progress). From a demand side point of view – infrastructure provides people with services they need and want." (Straub, 2010) As the need for investment in infrastructure continues to grow, private sector financing for infrastructure projects has developed around the world.

As energy infrastructure is a special sector of economies, energy business of private players keeps various tracks in their penetration strategies in developing world, public-private partnerships (PPPs) included. As expressed in the World Bank Energy Strategy (2009), public-private partnerships will be actively pursued also in future. There are various voices pro and cons public-private partnerships generally. Hall (2004, 2008a, 2008b, 2011) keeps strong critique against PPPs as they are failing in delivering infrastructure services for economies. As expressed by general secretary of the global union federation Public Services International. (2010), "public.private partnerships can be seen as another form of offloading debt – and the heavy price is paid by the next generation of citizens." On the other side, in the EU public-private partnerships are highly recommended and the European Commission (2005, 2009) outlines high hopes for developing public-private partnerships and this attitude towards PPPs is strongly present also in the EU 2020 strategy (European Commission, 2010). Public-private partnerships and their support are analysed also

within inernational economic organisations, such as OECD (2010), IMF (2004) etc. Support for PPPs systems and their application in infrastructure development in developing world was highly defended by European International Contractors EIC (2009). In comprehensive economic literature about PPPs we can found many regional analysis aimed at specific infrastructure sectors (Tomová, 2009, and many others) as well as studies calling for deeper ideological reflection of PPPs (Hodge – Greve, 2009). Special attention is devoted to development of PPPs market within the EU (Kappeler – Nemoz, 2010, EIB, 2010 also EPEC, 2010). Public-private partnerships (in energy sector) are also investigated as a tool decreasing poverty (UN, 2011).

Whether through partnerships or assets sales, energy sector in developing countries is privatised, contributing in this manner to globalisation wave in energy business. Our research ambition here is to reveal PPPs as a form of penetration to global energy market. What penetration strategies are followed by main players in global energy business in developing world? Which of them are extremely important from the point of view of the EU energy policy? What is a role of PPPs on this track?

1. Energy Sector Privatisation in Developing Countries – Tracks to Globalisation

Privatisation of energy sectors can follow variety of "tailor made" schemes. Overall privatisation strategy in country, export-import energy status, geographical localisation, legal and regulatory framework and other factors are those which contribute to "tailor-making" privatisation schemes of energy sectors in developing countries. When considering these schemes, some typology is needed to differ among different privatizations. (Savas, 2000) Some of them can be labelled as "soft" privatisation (Tomová, 2011b), meaning that only management and operation is being privatised through management or lease contracts or various public-private partnership arrangements (PPPs) such as RLRT[1]. On the other hand, there are also "hard" privatisation options, represented mainly by partial or full sale of country's energy assets. Another consideration within energy sector privatisation modes takes into account whether old assets are modernized or completely new assets are built, defining the latter as greenfield investments.

In spite of a lack of fully exhaustive PPPs typology and definition (Khanom, 2009, also Brinkerhoff and Brinkerhoff, 2011, also Tomová, 2011a and many others), we can follow in our effort the World Bank methodology of Private Participa-

[1] RLRT means that energy infrastructure aseets are rehabilated by a private entity, leased or rent and transfered again to the government after approved time.

tion in Infrastructure (PPI) according to which private sector can be involved in energy infrastructure through:

- Management and lease contracts, represented by contracts that transfer management of a public infrastructure to a private entity for a stated period of time, typically shorter, while the state (public) keeps control over revenues and investment.
- Concessions, which can be characterized as long term leases that shift control of revenues and investment to a private entity for a fixed period of time.
- Greenfields, including newly constructed infrastructure energy projects where ownership is either retained to some degree by private investors upon completion, or transferred to the public after a stated period of time.
- Divestures, which mean ownership transfer of existing public infrastructure to private firms, either partially or fully.

Which of these modes of private sector involvement in energy infrastructure can be labelled by the term PPPs is rather debatable. Some authors like Hammani (2006) or Scribner (2011) consider them completely as PPPs, OECD (2008) takes as PPPs only some (not all) listed in the mentioned concessions and greenfields schemes. European Commission (2005) distinguishes among contractual and institutional forms of PPPs, covering thus mainly concessions, greenfields (so called contractual PPPs) and partial divestures (so called institutional PPPs). In this analysis we shall use the term PPPs for non-divesture forms of privatisation to differ between "hard" and "soft" privatisation strategies. One can argue that some of greenfields schemes[2] coincide more with divestures privatisation schemes as they mean assets keeping by private entities more than "only" assets developing and managing. Despite of this, all three modes of privatisation schemes out of divestures we shall use as PPPs here to exclude sales of existing energy assets as a track for privatization and – consequently – globalization.

When mapping the energy sector privatization projects (divestures including), in developing regions within 1990–2010, 106 developing countries used some form of energy assets privatization or energy assets construction through greenfields with private sector involvement. Total number of energy privatization projects achieved 1 952 with invested value 548 279 millions USD. (35% of this sum realized within the region of Latin America and the Carribean). All regions participated in the process within the period analysed, South Asia with remarkable increase with regard to the projects number in last ten years.

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[2] BOO – Build, Operate and Own is a scheme in which a private company (or public-private joint venture) builds a new facility at its own risks, owns and operates at its own risks and the government usually provides revenue quarantees through long term take or pay contracts. MERCHANT is a scheme in which a private sponsor builds a new facility in a liberalized market, the private developer assumes construction, operation and market risks.

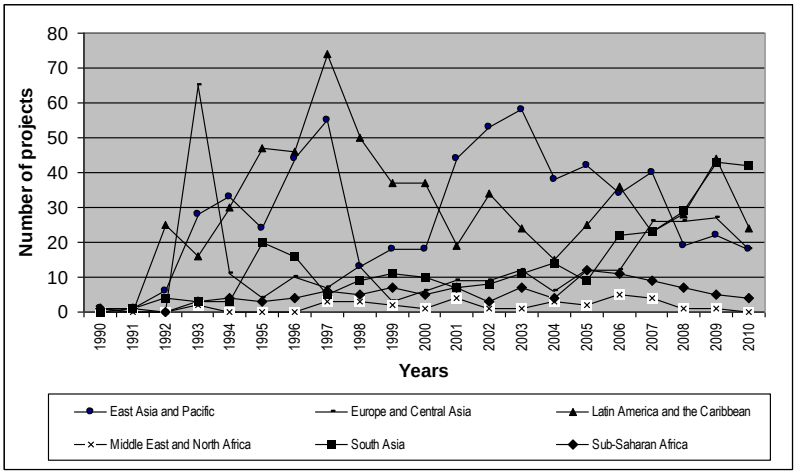

Fig. 1. Energy Privatization Projects Numbers in Developing World Regions 1990–2010

Source: World Bank PPI database.

When revealing tracks to privatisation and consequently globalization, analysis of trends through projects number can be rather misleading. Therefore, we analyse the trend using invested value and derive preferences of developing regions with regards varieties of privatisation options.

Table 1

Invested value in energy sector through different privatisation schemes in developing regions (mil. current USD) 1990–2010

Developing Region	Concessions	Divestures	Greenfields	Mangement and lease contracts	Total
East Asia and Pacific	5 479	24 297	95 212	0	**124 987**
Europe and Central Asia	7 594	45 802	27 846	12	**81 258**
Latin America and Carribean	70 352	29 103	92 991	210	**192 656**
Middle East and North Africa	6 607	224	10 902	0	**17 735**
South Asia	22	10 692	110 617	144	**121 475**
Sub-Saharan Africa	1 899	1 310	6 955	5	**10 107**
Grand Total	**91 958**	**111 428**	**344 523**	**371**	**548 279**

Source: World Bank PPI database.

The data contained in Table 1 and Figure 1 shows various preferences towards energy sector privatisation in world developing regions. They can be summarized as follows:

- the largest sum in energy sector privatisation in developing world has been invested through greenfields,
- four developing regions – Europe and Central Asia, Latin America and the Carribbean, South Asia and Sub-Saharan Africa used all privatisation options,
- East Asia and Pacific and Middle East and North Africa have not followed management contracts and lease contracts as privatisation mode,
- in inter-regional comparison, greenfields investments have achieved the highest value in South Asia,
- when comparing invested value in developing regions through various privatisation options, greenfields investment have dominated in all regions, except for the region of Europe and Central Asia, where divestures have been prevailing,
- through concessions the lowest value has been invested in energy sector privatisation in South Asia – inter-regionally as well as in intra-regional scope,
- inter-regionally, divestures demonstrated the lowest preference in Middle East and North Africa.

2. Penetration Strategies of Key Energy Players in Middle East and North Africa, Central Asia and Developing Europe

Within this analysis we try to identify penetration strategies of key energy sector players concentrating attention to Middle East and North Africa, Central Asia and Developing Europe as they are the most relevant for the EU Energy Policy. As some of the member countries are still in the list of developing countries (Romania, Bulgaria, Lithuania) they are included, too. We put in our analysis 8 energy companies trans-nationally present within the regions stated, both in electricity and natural gas sub-sectors. Only those players with the scope of activities at least in three countries within the regions are considered. In our choice we can find the companies from the old member countries of the EU (Germany, France, Italy and Austria), from the new member countries of the EU (Czech Republic), from the Russian Federation as the relevant energy partner for the EU as well as out of the EU from the United States of America. The companies analysed invested within the regions analysed almost 40 % of the total value of investments. In Table 2 information about geographical scope of the companies´ penetration is contained as well as used penetration (privatisation) channel.[3]

[3] Projects cancelled or concluded are not included.

Table 2

Penetration Strategies of Key Energy Sector Players in the regions of Middle East, North Africa, Europe and Central Asia (developing countries only)

Investor	Investor Country	Sub-Sector	Investments Countries	Total Sum invested in mil. current USD	Penetration Strategy (Projects Number)			
					C	D	G	MLC
AES Corporation	USA	Electricity	Kazakhstan, Ukraine, Turkey, Bulgaria, Jordan	2 400	1	4	5	2
CEZ Group	Czech Republic	Electricity	Turkey, Bulgaria, Romania, Albania	3 616	1	8	1	-
E.ON	Germany	Electricity	Lithuania, Bulgaria, Romania, RF	12 385	-	18	1	-
Enel Spa	Italy	Electricity	Bulgaria, Romania, RF	5 091	-	7	1	-
Energie Vers. Niederosterreich AG	Austria	Electricity	Bulgaria, Macedonia, Albania	1 629	-	7	3	-
Gazprom	RF	Natural gas	Bulgaria, Lithuania, Armenia, Moldavia, Belarus	8 821	3	15	2	-
Suez	France	Electricity	Morocco, Turkey, Romania	4 227	3	3	1	-
Unified Energy Systems of Russia	RF	Electricity	Georgia, Kazakhstan, Armenia	643	-	11	-	2

Source: Author's compilation from the WB PPI database.

Conclusion

As it can be seen in the previous analysis, privatization and globalization are twins in energy sector development. In their penetration strategies, key energy business players use broad portfolio of penetration strategies with regards existing energy infrastructure as well as newly constructed one. The energy players considered within our research demonstrate that enlargement of geographical scope of global business requires different channels of penetration, "soft" form of privatization (PPPs) included. Flexibility of penetration strategy based on various privatization schemes is therefore crucial factor undermining global goals of energy sector players which act trans-nationally. Determinants of penetration choice are – according to our viewing – intricate socio-economic and political issues given mainly contextually.

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ŚWIATOWY BIZNES ENERGETYCZNY, PARTNERSTWA PUBLICZNO-PRYWATNE A KRAJE ROZWIJAJĄCE SIĘ

Streszczenie

W artykule poddano analizie partnerstwa publiczno-prywatne w sektorze energetycznym jako formę strategii penetracji w krajach rozwijających się. Szczególną uwagę poświęcono krajom rozwijającym się w Europie, Azji Środkowej, Afryce Północnej i na Bliskim Wschodzie, ponieważ mają one istotne znaczenie dla polityki energetycznej UE. W artykule przedstawiono głównych światowych graczy w sektorze energetycznym w wyżej wymienionych regionach, przy okazji analizując procesy globalizacji i prywatyzacji w sektorze energetycznym, w tym miękkie formy reprezentowane przez partnerstwa publiczno-prywatne. Dokument ten podsumowuje cząstkowe wyniki projektu - MŠ SR Grant Project VEGA 1/0341/09.

Tłumaczenie Maciej Czaplewski