

Market Competition, Public Good and Institutional Governance

by

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The emergence of the market as a regulatory tool for the public sector and the promotion of competition among institutions are based upon the idea that they promote institutions' responsiveness to society and a more efficient use of public funds. However, autonomous institutions forced to compete under market-like conditions might follow strategies aiming at "their own good", especially when facing stringent financial conditions. This does not guarantee that the institutions' strategic objectives will coincide or converge with the "public good" or with the government's objectives, which opens the way for state interference.

In Portugal, the combined effect of the higher education system's fast expansion and the country's decreasing birth rate has led to a situation of strong competition for students. In this paper, the effect of this competition on the behaviour of both public and private institutions is analysed by concentrating on institutional policies for offering new study programmes and promoting the access of new students. The behaviour of the two sub-sectors is compared to verify how far strong competition will promote converging attitudes from both sub-sectors, thus resulting in relaxing or even ignoring the pursuit of public good.

1. Introduction

Over the last few decades, at least in some countries, the use of market regulation as an instrument of public policy has become increasingly popular. One observes, "the active experimentation with market-oriented policies by states intent on maximising the social benefits of national higher education systems" (Dill, *et al.*, 2004, p. 327), which has reshaped the nature and conditions of academic work and also the modes of the relationship between higher education institutions and the state.

Under the neo-liberal *zeitgeist*, a new political philosophy has developed that promotes the perspective that the state should decrease its activity as service provider, that state regulation should retreat in favour of market regulation, and that competition among institutions is necessary to ensure that they will become more responsive to society and more efficient in the use of public funds.

The new market-based regulatory framework was expected to soften state interference in higher education institutions. However, this new model creates difficulties to state steering, as autonomous institutions forced to compete under market-like conditions may pursue strategies aiming at increasing

“their own good”, not guaranteeing that their strategic objectives will coincide or converge with the “public good” or with the government’s objectives.

We use data from the Portuguese higher education system to illustrate how both public and private institutions may deviate from the concept of public good or ignore the government’s objectives, namely under conditions of strong competition, which may open the way to intrusive behaviour by the government to force institutions to comply with the government’s policy objectives.

2. The rise of market regulation as an instrument of public policy and the changing relationship between higher education institutions and the state

Over the last two decades, markets have assumed an increasing importance in the regulation of the public sector. This is partly the consequence of the assumption by some governments that market-like competition will force public services to become more responsive to the demands of their “clients”. Market competition is the new instrument of public policy that will awake sclerotic public services from their state of comfortably sheltered and slow routines towards the “fast, adventurous, carefree, gung-ho, open-plan, computerised, individualism of choice, autonomous enterprises and sudden opportunity” (Ball, 1998, p. 124). Therefore governments are, more and more, testing the introduction of market-like mechanisms as instruments of public regulation. In Europe, the Bologna Declaration, by “...redefining the nature and content of academic programmes is transforming what were once state monopolies over academic degrees into competitive international markets...” (Dill, *et al.*, 2004, p. 330).

The efficient use of market regulation presents a number of problems. For the allocation of goods and services to be optimally efficient for the larger society (Leslie and Johnson, 1974) the market needs to be perfectly competitive, which implies a number of conditions that are very difficult to fulfil. Market efficiency depends upon the clients’ rational economic decisions, which implies a good knowledge of the price and characteristics of the goods and services to be purchased, as well as the market conditions. However, in many cases, the relevant information is not available (imperfect information) or the producer has a much more detailed knowledge than the consumer (asymmetric information).

The lack of “perfect information” is very acute in the case of higher education, which has three simultaneous characteristics: it is an experience good; it is a rare purchase; and it has very high opting-out costs. Higher education is a consumption good because its relevant characteristics can only be effectively assessed by consumption. It is only by attending a study programme that the student gets a real idea of what he has purchased in terms of quality, professors, and educational experience. Being a rare purchase – in general a student enrolls in only a graduate programme – the student cannot derive market experience from frequent purchases. And it is in general rather expensive to change to a different study programme or institution, which means that opting out may not be an easy option. The simultaneous presence of these three characteristics in education legitimises the taking of action by governments to guarantee consumer protection, which include different forms of information, such as licensing, accreditation, and the provision of information on the quality of goods and services (Smith, 2000).

Dill considers that “students lack sufficient information about the quality of academic institutions or programs to make discriminating choices” (1997, p. 180) as what they need is the measure of prospective future earnings provided by alternative academic programmes and not “...peer review evaluation of teaching processes, nor subjective judgements of the quality of a curriculum” (*ibid*).

3. Quasi-markets and immature clients

However, even if the relevant data for a rational economic choice were available, many students (or their families) would not use it. The idea that every human acts as a kind of robot that will make all their choices only to maximise its economic profit is too simpleminded to be true, which questions the validity of the rational economic choices hypothesis. For Vossensteyn and de Jong:

Because (potential) students are uncertain about the actual contents of the study, getting a degree and finding a proper job after graduation, the decision to attend higher education and to select a particular program is surrounded with a lot of uncertainty. ...Psychological phenomena form a “filter” or a mental framework through which students judge financial incentives in relation to their study choices (2005).

This raises what David Dill calls the problem of immature students, which is the rationale for “the implementation of quasi-markets, rather than consumer-oriented markets, for the distribution of academic programs” (Dill, 1997, p. 181). Cave and Kogan (1990, p. 183) consider that a quasi-market is in operation when goods or services, instead of being bought by their final users, are bought by an agent (in general a public agent) on behalf of clients to whom these goods and services are then allocated directly. This creates a quasi-market in which the state becomes a purchaser of services from independent providers, which compete with each other in an internal market (Le Grand and Bartlett, 1993).

The rationale behind the implementation of quasi-markets is that the state, through a government agency, is more capable of protecting the interests of immature consumers than consumers themselves. As the government agency has more knowledge about the product being purchased than do individual consumers, it is more capable of making sound economic choices and it has far more bargaining power because it purchases large amounts of goods and services. Therefore the state is no longer a provider of higher education, but assumes the principal role, representing the interests of consumers by making contracts with competing institutions.

The emergence of the market in higher education has gone hand in hand with increased institutional autonomy, as producers must have decision-making freedom to compete in a market. This shift of decision-making responsibility to producers has had “substantial implications for institutional governance and management” (Dill, *et al.*, 2004, p. 340) as well as for the relationship between governments and institutions. Indeed, the government agencies making the purchases face the classical principal-agent dilemma: “how the principal [government] can best motivate the agent [university] to perform as the principal would prefer, taking into account the difficulties in monitoring the agent’s activities” (Sappington, 1991, p. 45). That is why governments have been introducing an increasing number of control and steering mechanisms, such as performance indicators and measures of academic quality.

4. Steering, market competition and public good

This is where we present our research problem: will public higher education institutions and/or non profit private institutions always act to further the public good even under conditions of market-like competition, or will they act to protect their own interest?

Public higher education institutions receive most of their budget, or at least a significant part of it, from the state under the argument that they further the public good by producing externalities, *i.e.*, by producing not only individual private benefits for those acquiring a degree, but also public benefits. They are non-profit organisations that are by law forced to reinvest any surplus in the organisation itself, instead of providing additional private benefits for its members. This, in principle, offers the state some guarantee that the organisation will not digress from its obligation of upholding the public good.

Many private higher education institutions in Portugal are either foundations or co-operative associations that the state recognises as being “public interest institutions”, which, combined with their non-profit character, grants them substantial fiscal benefits. Even if they are not directly funded by the state, their non-profit character should guarantee that they would aim at furthering the public good, which is a fundamental component of their mission.

Massy (2004a, 2004b), in two very interesting papers, argues that “...the way institutions currently respond to markets and seek internal efficiencies, left unchecked, is unlikely to serve the public good” (2004b, p. 28), a danger that is exacerbated by excessive competition or by retrenchment operations. Massy (*ibid*) argues that when competition is excessive or when the state cuts public subsidies, thus curtailing the institutional capacity for discretionary spending, non-profit institutions behave like for-profit ones, ignoring the promotion of the public good inherent to their missions.

In Portugal, in the 1980s, there was a very fast increase in demand for higher education (Correia *et al.*, 2002) that created the conditions for the development of a private sector of higher education that absorbed the excess in demand that could not be met by public institutions. Until the late 1990s the demand so clearly exceeded the available offers that there were many students willing to enrol in any available programme or institution, irrespective of its quality or future employment prospects.

At present, one observes a situation of strong competition for students. After the period of very fast expansion that had no parallel in any other European country, the number of candidates to higher education has been steadily declining over the last few years, due to consistently declining birth rates. Public institutions are forced to compete because their budget is allocated by a funding formula that is strongly dependent on student enrolments. Private institutions are also forced to compete because their budget depends directly on the tuition fees paid by students.

In this context, one wants to analyse the development trends of the Portuguese higher education system to show that public, as well as private institutions forced to compete under market-like conditions, have used their room for manoeuvre to design their own (survival) strategies, which sometimes have not been consistent with the public good or the government’s objectives.

5. The Portuguese case: a balanced network of higher education or institutional self-interest?

5.1. Introduction

In Portugal, the 1974 revolution was followed by a period of very fast expansion of the higher education system, which includes both public and private institutions. Over approximately one decade, from the mid-1980s to the mid-1990s, the government had three main policy objectives: increasing the participation rate in higher education, promoting a more even distribution of higher education across the country and increasing the offer of study programmes in areas relevant to the country's economic development.

In 1988, the government decided that students would no longer be required to obtain a minimum grade in the national examinations to enter higher education, the grades being used only to rank the students in the national placement system. A student could enter higher education, even with zero grades, provided that there were unfilled vacancies. This increased the number of candidates by 75% from 1988 to 1989, thus creating exceptional conditions for the development of the private sector.

On the other hand, the government has used the network of public polytechnics created by Decree-Law 513-T/79 as a policy tool to diversify the system for training intermediate level manpower, capable of more concrete and practical work, instead of more qualified manpower, more fit for top management or conceptual activities, and probably already produced in excess by the universities. The other objective was promoting access equity both by increasing the recruitment among vocational secondary education students and by using regional preference mechanisms to satisfy regional demand – polytechnics were allowed to establish regional quotas in favour of students native from the area of influence of each polytechnic institution.

Throughout the expansion period, there was no competition among institutions. Demand for higher education clearly exceeded the available offers and market mechanisms could not play an effective regulation role. The government was so concerned with student participation that it neither raised difficulties when the private sector increased its offers in areas that did not correspond to the stated public priorities, nor did it exercise any credible control over the quality of education provision.

Since the mid 1990s, there has been a dramatic change, as a number of factors – including the accumulated effects of years of lower birth rates and the government's decision to pay more attention to quality, namely by reintroducing minimum grades in the access to higher education – has progressively decreased the number of candidates for higher education. This has led to a situation of strong competition for students, initially only in the private sector, but, more recently, also in the public sector.

In the following section, the developments during the fast expansion period, without competition for students, are analysed first. Next, the period of decreasing demand and the effect of the competition for students on the behaviour of institutions analysed. In this second part the attention is focused on institutional policies for offering new study programmes and promoting the access of new students. The behaviour of the public and private sub-sectors is compared in order to verify how far strong competition will promote converging attitudes from both sub-sectors, thus resulting in a relaxing of, or even ignoring of the pursuit of public good.

5.2. The fast expansion period

The development of the Higher Education system during the fast expansion period had a strong influence in shaping its present structure. In the absence of competition mechanisms and of state regulation, the private sector has developed by concentrating its offers in the main urban areas around Lisbon and Porto, leading to a very uneven regional distribution. Table 1 shows that in 1997/98 (at the end of the expansion period) almost 83% of private enrolments were concentrated in Lisbon/Setúbal and Porto, with only 17% of enrolments outside these major towns. In contrast, the public sector had almost 50% of enrolments outside those major towns.

Table 1. **Enrolments in higher education, 1997/98 (%)**

Location	Private		Public		Total	
	Number	%	Number	%	Number	%
Lisbon/Setúbal (1)	64 328	52.24%	78 009	34.42%	142 337	40.96%
Porto (2)	35 891	29.70%	36 044	15.90%	71 935	20.70%
Main towns (1)+(2)	100 219	82.94%	114 053	50.32%	214 272	61.67%
Others	20 612	17.06%	112 589	49.68%	133 201	38.33%
Total	120 831	100.00%	226 642	100.00%	347 473	100.00%

Source: OCES, 2005

Table 2 presents the 1997/98 enrolments per 1 000 inhabitants for the different regions of mainland Portugal. The private sector presents a very unbalanced regional distribution, with a strong concentration in the Lisbon region (where Lisbon and Setúbal are located), followed by the North Region (where Porto is located), its offers being much lower in the other regions, the university sector mainly responsible for this unbalanced situation. By contrast, the public sector presents a much more balanced distribution and one can see that the polytechnic sector's contribution to this result is important. The government policy of giving priority to the development of the polytechnic public sector over the public university sector for almost one decade has been effective in terms of more balanced regional diversity.

Table 2. **Enrolments in higher education per 1 000 in habitants, 1997/98**

Region	Private			Public		
	Polytechnics	Universities	Total	Polytechnics	Universities	Total
Alentejo	0.4	4.0	4.4	9.3	8.9	18.2
Algarve	0.3	1.3	1.6	10.7	9.7	20.4
Centre	1.0	2.9	4.0	10.6	14.0	24.5
Lisbon	4.1	19.9	24.1	6.5	22.8	29.3
North	3.4	8.2	11.6	5.1	12.2	17.2

Source: OCES, 2005

When one examines the enrolments by disciplinary area a similar picture emerges (Table 3). In the case of private universities, there was an extraordinary concentration of study programmes in the area of Social Sciences, Commerce and Law, representing 65.5% of the total, while every other area represents less than 10%. Private universities have concentrated their programme offers in Law, Management and Business Administration, which have low investment costs and low running costs, without paying attention to eventual labour market saturation. Private Polytechnics have concentrated their offers in the areas of Education/Teacher training (35.7%) and Management and Business Administration (35.6%), the third area being Health and Social Protection (essentially nursing schools), which represented only 9.8%.

Public Polytechnics have concentrated their enrolments in Engineering (32.4%), Management and Business Administration (30.7%), Education/Teacher training (14.1%), Health and Social Protection (9.0%) and Agriculture (4.6%), which corresponds roughly to the recommendations of the World Bank (Teixeira, Amaral and Rosa, 2003). The 1978 *World Bank's Report* no. 1807-PO, suggested that, as regards manpower provision, Portugal needed to train high level technicians, but also middle level personnel (technicians with short cycle post-secondary education: engineering and health technologies, middle level managers and some 500 agricultural technicians on a yearly basis), while professors for basic education should complete shorter degrees than those traditionally offered by universities. The health sector also includes nursing schools.

Public universities offered a diversified provision across the different disciplines and the area with the most enrolments represents less than 23% of the total.

Table 3. Enrolments in public and private institutions by disciplinary area, 1997/98

Area	Private				Public			
	Polytechnic		University		Polytechnic		University	
	Number	%	Number	%	Number	%	Number	%
Education	9 614	35.7%	280	0.3%	10 276	14.1%	16 615	10.8%
Arts and Humanities	1 766	6.6%	7 599	8.1%	2 868	3.9%	19 006	12.3%
Social Sc., Commerce, Law	9 570	35.6%	61 523	65.5%	22 321	30.7%	38 031	24.7%
Sciences, Maths, Informatics	1 089	4.0%	5 925	6.3%	1 349	1.9%	23 188	15.1%
Engineering, Manufacturing and Building Industries	1 162	4.3%	9 324	9.9%	23 518	32.4%	35 166	22.8%
Agriculture	0	0.0%	59	0.1%	3 379	4.6%	6 441	4.2%
Health and Social Protection	2 651	9.8%	5 864	6.2%	6 560	9.0%	8 925	5.8%
Services	1 065	4.0%	3 340	3.6%	2 420	3.3%	6 579	4.3%
Total	26 917	100.0%	93 914	100.0%	72 691	100.0%	153 951	100.0%

Source: OCES, 2005

Public universities had a very high degree of autonomy and they were allowed to initiate new degree programmes without previous approval by the Ministry. One can observe over the expansion period that public universities, being relatively well insulated from market demands, addressed the issues of differentiation and diversification primarily on the basis of the knowledge base that they could command. Public polytechnics had less autonomy than public universities as they could not start

new degree programmes without the Ministry's previous authorisation. Therefore they developed following roughly the government's general objectives and goals.

On the other hand, private higher education institutions have tuition fees as their main source of funding and in principle they must be careful to offer programmes that can attract enough students to ensure their survival. However, during the expansion period resources were not scarce because demand had largely exceeded the available provision and the private sector's strategy had more to do with maximising short-term profits than aiming at a better product which, in the long run, would offer them better prospects of survival (Teixeira and Amaral, 2001). Therefore the private sector concentrated its offers in areas of low-cost and low-risk activities, without paying too much attention to labour market needs. As recognised by Teixeira and Amaral, "...private institutions typically responded to strong demand by duplicating the existing public provision, or by a rapid expansion (but not its launching), of low-cost disciplines" (2001).

5.3. The retrenchment period

It was from the mid 1990s that the development context of Portuguese higher education started to change dramatically as the combined result of declining birth rates and a policy move towards quality. Table 4 presents the evolution of enrolments since 1997/98. It can be seen that the private university sector was seriously hit, as its enrolments had decreased by more than 26 500 students since 1997/98, which represents a 28.5% decrease. The private polytechnic sector was far more stable, with increasing enrolments until 2002/03, before they also started to decline. The public sector was also more stable and the declining enrolments trend has only initiated in 2003/04.

Table 4. Enrolments in higher education, retrenchment period

		1997/98	1998/99	1999/00	200/01	2001/02	2002/03	2003/04	2004/05
Public	Universities	153 951	158 850	164 722	171 735	176 303	178 000	176 827	173 897
	Polytechnics	72 691	80 007	90 286	101 795	108 486	112 532	111 482	108 376
	Total Public	226 642	238 857	255 008	273 530	284 789	290 532	288 309	282 273
Private	Universities	93 914	89 361	88 190	82 979	79 908	77 109	73 708	67 157
	Polytechnics	26 917	28 572	30 547	31 194	31 904	33 190	33 046	31 507
	Total Private	120 831	117 933	118 737	114 173	111 812	110 299	106 754	98 664
TOTAL		347 473	356 790	373 745	387 703	396 601	400 831	395 063	380 937

Source: OCES, 2005

When the data are analysed in more detail, some interesting patterns will emerge. Table 5 presents the decline in the number of new students entering private university education. The total decrease equals 25.4%, but while the area of Social Sciences, Commerce and Law presents a 35.3% decrease, all the other areas show only a 10.6% decrease. Therefore the present dramatic situation of many private universities is the result of their initial strategy of concentrating the programme offers in a low-cost area with declining employment prospects. For instance, first year total enrolments in Law have declined from 1705 in 1997/98 to only 674 in 2004/05, which corresponds to a 60.5% decline.

Table 5. First year enrolments in the private university sector

	1997/98	1998/99	1999/00	200/01	2001/02	2002/03	2003/04	2004/05
Total private university	16 823	17 141	16 575	16 942	16 333	16 137	14 528	12 545

Social sci., commerce, law	10 107	9 501	8 729	9 099	8 477	8 682	7 721	6 538
Others	6 716	7 640	7 846	7 843	7 856	7 455	6 807	6 007

Source: OCES, 2005

It has already been observed that the private polytechnic sector has remained far more stable than the private university sector. The number of first year enrolled students has changed from a total of 8 875 in 1997/98 to a maximum of 10 669 in 2001/02, to a decrease to 8 453 in 2004/05, which represents a decline of only 4.8% relative to 1997/98. Table 6 explains this apparently anomalous behaviour.

There was also a decline of enrolments in the two traditional major areas, Education (from 36.95 to 24.4%) and Social Sciences, Commerce and Law (from 31.6% to 14.0%), while the area of Health and Social Protection shows a dramatic increase from 13.7% to 52.1%.

Table 6. Evolution of first year enrolments in the private polytechnic sector (% per area)

	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05
Education	36,9%	38,3%	53,3%	48,5%	44,4%	39,3%	33,0%	24,4%
Arts and Humanities	7,7%	6,0%	4,1%	4,7%	3,5%	3,8%	3,5%	4,3%
Social Sc., Commerce, Law	31,6%	27,3%	17,7%	14,0%	13,2%	12,5%	12,9%	14,0%
Sciences, Maths, Informatics	3,8%	3,7%	2,9%	2,9%	2,4%	2,3%	1,9%	1,9%
Engineering, Manufacturing and Building Industries	3,2%	4,1%	2,2%	2,5%	2,3%	1,7%	1,9%	1,8%
Agriculture	0,0%	0,1%	0,1%	0,0%	0,0%	0,0%	0,0%	0,0%
Health and Social Protection	13,7%	17,6%	18,0%	25,7%	32,6%	38,1%	44,4%	52,1%
Services	3,2%	2,9%	1,7%	1,7%	1,6%	2,3%	2,4%	1,5%
Total	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

Source : OCES, 2005

The increase of enrolments in the area of Health and Social Protection was due to the transfer of the Nursing Schools and Health Technician Schools from the Ministry of Health to the Ministry of Education, which has created a new area with very strong student attraction. The behaviour of the institutions has very strong isomorphic characteristics. When an institution starts a new programme that attracts students there is a phenomenon similar to which happened in the new world when someone struck gold: lots of institutions jump into this new opportunity for a short term escape from bankruptcy and propose new programmes irrespective of the absence of consolidated academic staff, facilities or libraries. There was the “management” race, the “environment” race, and more recently the “health” race.

Private universities also tried to move into the promising new health sector by shedding their traditional “low-risk” behaviour and offering new Medicine programmes. However the Medicine area is quite strictly regulated and although the private sector has proposed eight new programmes, none of them has so far been authorised.

In the public sector the phenomenon is not yet so clear, one of the reasons being the fact that decreasing enrolments trends are more recent. However, one may refer to the case of the health sector in the public polytechnics, with an increase in the first year enrolments from 2 543 in 1997/98 to 5 680 in 2004/05, or the case of architecture in the universities, with an increase in the first year enrolments from 1 864 in 1997/98 to 2 458 in 2004/05.

The “environment” also offers an interesting example for the whole system as there was a time when it was considered a promising new area. When the “new area” is discovered, one observes an increase in the number of programmes and enrolments until the labour market becomes saturated and its attractiveness starts to decline (table 7).

Table 7. **First year enrolments (system level) in Environment degrees**

1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05
799	870	970	1064	900	1016	850	546

Source: OCES, 2005

6. Conclusions

There is a widespread conviction that the “market” will be more effective than state regulation in promoting diversity of higher education systems, both in terms of institutional types, of programmes and of activities. Geiger formulates the hypothesis that:

...when resources are tight, the market is a much more powerful force for the differentiation of higher education institutions and functions than centralized policy and control (1996, p. 2000).

Geiger considers that at times of prosperity academic forms of coordination will prevail, leading to academic drift as efforts to raise institutional status result in imitation of the more prestigious institutions. When resources are scarce, the fight for survival takes place under market co-ordination, and institutions will diversify in search of market niches and new clientele. As Geiger says: “when institutions cannot do what they like, they do what they must.”

In Portugal, during the period of fast expansion, weak state regulation and the absence of market competition allowed the private sector to develop in directions contrary to the government’s policy objectives, and even against the long time survival interests of its own institutions. In the retrenchment period, when strong competition for students emerged, private institutions were forced to abandon their initial strategy of low-cost/low-risk offers and to move into areas that would attract students. However, institutions seem to pursue short-term survival strategies rather than long-term strategies or the government’s objectives. Institutions jump on to newly available opportunities until the labour market sends clear signs of saturation and students move away, a behaviour that is similar in public and private institutions.

References

- Amaral, A. and P. Teixeira (2000), "The Rise and Fall of the Private Sector in Portuguese Higher Education?" *Higher Education Policy*, Vol. 13, No 3, pp. 245-266.
- Ball, S.J. (1998), "Big Policies/Small World: An Introduction to International Perspectives in Education Policy", *Comparative Education*, Vol. 34, No 2, pp. 119–130.
- Cave, M. and M. Kogan (1990), "Some Concluding Observations", in M. Cave, M. Kogan and R. Smith (eds.), *Output and Performance Measurements in Government - The State of the Art*, Jessica Kingsley Publishers, London.
- Correia, F., A. Amaral and A. Magalhães (2002), "Public and Private Higher Education in Portugal: Unintended Effects of Deregulation", *European Journal of Education*, Vol. 37, No 4, pp. 457-472.
- Dill, D. (1997), "Higher Education Markets and Public Policy", *Higher Education Policy*, Vol. 10, No 3/4, pp. 167-185.
- Dill, D., P. Teixeira, B. Jongbloed and A. Amaral (2004), "Conclusion", in P. Teixeira, B. Jongbloed, D. Dill and A. Amaral (eds), *Markets in Higher Education – Rhetoric or reality?*, Kluwer Academic Publishers, Amsterdam, pp. 327–352.
- Geiger, R. (1996), "Diversification in U.S. Higher Education: Historical Patterns and Current Trends", in L. Meek, L. Goedegebuure, O. Kivinen and R. Rinne (eds.), *The Mockers and the Mocked: Comparative Perspectives on Differentiation, Convergence and Diversity in Higher Education*, Pergamon, Surrey , pp. 188–203.
- Le Grand, J. and W. Bartlett (1993), *Quasi-Markets and Social Policy*, Macmillan Press, London.
- Leslie, L.L. and G.P. Johnson (1974), "The Market Model and Higher Education", *Journal of Higher Education*, Vol. 45, pp. 1-20.
- Massy, W. (2004a), "Markets in Higher Education: Do They Promote Internal Efficiency?", in Teixeira, P., B. Jongbloed, D. Dill and A. Amaral (eds), *Markets in Higher Education: Rhetoric or Reality?*, Kluwer Academic Publishers, Dordrecht , pp. 13-35.
- Massy, W.F. (2004b), "Collegium Economicum: Why Institutions Do What They Do?", *Change*, Vol. 36, No 4, pp. 26-35.
- Sappington, D.E.M. (1991), "Incentives in Principal-Agent Relationship", *Journal of Economic Perspectives*, Vol. 5, No 2, pp. 45–66.
- Smith, R.L. (2000), "When Competition is Not Enough: Consumer Protection", *Australian Economic Papers*, Vol. 39, No 4, pp. 408–425.

- Teixeira, P. and A. Amaral (2001), “Private Higher Education and Diversity: An Exploratory Survey”, *Higher Education Quarterly*, Vol. 55, No 4, pp. 359–395.
- Teixeira, P., A. Amaral and M.J. Rosa (2003), “Mediating the Economic Pulses – The International Connections in Portuguese Higher Education”, *Higher Education Quarterly*, Vol. 57, No 2, pp. 181-203.
- Vossensteyn, H. and U. De Jong (2006), “Student Financing in the Netherlands: A Behavioural Economic Perspective”, in P.N. Teixeira, D.B. Johnstone, M.J. Rosa, H. Vossensteyn (eds.) *Cost-sharing and Accessibility in Higher Education: A Fairer Deal?*, Higher Education Dynamics series, Vol. 14, Springer, Dordrecht.