



DOCTORAL STUDIES IN SLOVENIA – AN OPPORTUNITY FOR A CAREER IN THE ECONOMY OR HIGHER EDUCATION?

Valentina Jošt, Assistant and PhD student

International School for Social and Business Studies, Slovenia

valentina.jost@mfdps.si

Dr. Nada Trunk Širca, Associate Professor

International School for Social and Business Studies, Slovenia and

University of Primorska, Faculty of Management Koper, Slovenia

nada.trunk@mfdps.si

Abstract:

Today, higher education institutions are recognised as the key agent in creating knowledge society and knowledge-based economy. The key task to achieve this objective is to prepare doctoral students for careers in various sectors of society, especially in the economy. In the past few years, the role of doctoral studies has changed significantly. If they were traditionally treated as an entrance ticket for academic career, nowadays we recognise the importance of doctors of philosophy in various spheres of society. Our paper deals with doctoral students in terms of their employability, i.e. whether they have an opportunity to work in the economy or higher education. In accordance with this perspective, we provide statistics on the enrolment in and completion of doctoral studies, which indicate the need for a thorough market analysis and the modernisation of doctoral study programmes so that they will prepare future doctors of philosophy for careers in various sectors, especially in the economy. On the one hand, we have witnessed a significant increase in the enrolment in doctoral studies, and on the other, an increase in the number of unemployed doctors of philosophy. Once elite, doctors of philosophy today face an increasing competition, which is why individuals should in making their decision whether to enrol in doctoral studies or not take into account their own interests and the needs and demands of the labour market.

Keywords: higher education, knowledge society, doctors of philosophy (PhD), employability, labour market.

1. DOCTORAL STUDENTS FOR KNOWLEDGE SOCIETY

Since the adoption of the Lisbon Strategy in 2000, the European Union has been working towards the creation of European knowledge society and knowledge-based economy, an effort that requires cooperation of various actors (COM 2003). Through the discourse about knowledge society¹, higher education has, with its core activities of knowledge production, use and dissemination, and training of highly skilled labour, become increasingly important for the international competitiveness of nation states in the global world. Knowledge and intellectual property have become key factors of economic development, and universities key providers of knowledge and human resources aimed at achieving the common good (Nokkala, 2006, p. 177). The new “mission of universities is to promote cooperation and knowledge transfer to the economy and society” (Probst & Lepori, 2008, p. 479), which resulted in the increasing importance of applied research. Doctoral studies are one of the most important factors of knowledge society, as doctors of philosophy are the most highly skilled researchers and best qualified for knowledge production, use and dissemination (Auriol, 2010, p. 5–6). As such, they “provide the key source of knowledge-based economy, i.e. new knowledge” (Carter et al., 2010, p. 247). One of the roles of higher education is to integrate education, research and innovation through the cooperation with a wider community, and to prepare researchers for work in various areas of society. Due to an important strategic role of higher education in solving socio-economic problems (Gül et al., 2010, p. 1883), the role of doctoral degrees has changed. Traditional doctoral degrees are confronted with challenges of how to cope with changes in society (Park, 2005, p. 190), since they are often too specialised, do not encourage interdisciplinary work and do not provide a sufficiently broad set of skills required by new societal conditions (Usher, 2002, p. 10).

Table 1: Traditional understanding of higher education and the requirements of knowledge society

Traditional understanding of higher education	Requirements of knowledge society and knowledge-based economy
Research is the main endeavour and the centre of academic life	Marketing of research is the main endeavour of academic life
Quality is guided by professional evaluation and professional autonomy	Quality is guided by social responsibility
An emphasis on basic knowledge	An emphasis on applied knowledge
The task of higher education is to discover the cognitive truth	The task of higher education is to create knowledge in the field of services and innovation
Knowledge is best organised by disciplines	Knowledge is best organised in an interdisciplinary way
Reputation is achieved through publications, conferences, participation and research funding	Reputation is achieved through the cooperation with the economy
An emphasis on the specialisation of discipline/field	An emphasis on the marketing of intellectual property

Source: adapted from Nicholls in Usher, 2002, p. 8.

Knowledge society and knowledge-based economy require higher education to train doctors of philosophy for solving contemporary societal problems through original research, with the

¹ In its documents, the European Commission does not clearly define the terms “knowledge society” and “knowledge-based economy”, and mostly uses them alternately as synonyms (Valimaa & Hoffman, 2008, p. 275–276). In this paper, we use them in the same manner.

emphasis on practical knowledge, cooperation with the economy and social responsibility (see Table 1).

1.1. Doctoral studies as an opportunity for a career in higher education or the economy?

In the past, doctoral studies were treated as an entrance ticket for a career in higher education and research institutes. Today, the recognised importance and role of doctors of philosophy in various spheres of society, especially in the economy, and “the need for the transfer of knowledge and applied knowledge, have made the academic understanding of a doctorate as aimed basic knowledge outdated” (Probst & Lepori, 2008, p. 477). Doctors of philosophy now have an opportunity for careers in various spheres of society. This means that they have increasingly more employment opportunities, and answers our question about whether nowadays doctoral studies offer an opportunity for a career in the economy or higher education – in the economy. However, changes that affect the employability and career path of doctors of philosophy result in “doctors of philosophy, key human resources for development, research and innovation, facing many problems in the labour market” (Auriol, 2010, p. 3).

In addition to promoting the education and employment of doctoral students in different sectors of society not only in the academic sphere, the key change affecting the employment of doctors of philosophy is mass education at the doctoral level. Doctors of philosophy, once the elite of chosen ones, today face strong competition in the labour market, especially in the business sector and research professions. “The supply of doctors of science in the labour market is increasing” (The Economist, 2010), and the rapid growth of the number of graduates at the “doctoral level raises the question about the absorption capacity of the labour market” (Auriol, 2010, p. 11). A huge supply of doctors of philosophy has an impact on their working conditions both in higher education and the economy. Higher education represents a relatively secure employment for doctors of philosophy, but due to strong competition they are often treated as relatively cheap intellectual workforce. The economy, on the other hand, represents a new working environment and conditions for which the majority of doctors of philosophy are not well prepared and trained (The Economist, 2010). Furthermore, “the economy often complains about the lack of knowledge at the high level, suggesting that doctors of philosophy are not taught the right things” (The Economist, 2010). Instead of new opportunities, a career in the economy can bring new obstacles if traditional doctoral study programmes do not provide doctors of philosophy with the skills and knowledge needed by the economy. The employability of graduates of doctoral programmes is to be increased by modernising doctoral programmes, particularly by developing students’ leadership skills, teamwork abilities, soft skills, etc. (Auriol, 2010, p. 5–6). More and more attention is given to “professional doctorates” that represent a critical response to the above shortcomings of traditional doctoral programmes and focus on meeting the needs of knowledge society and knowledge-based economy. They can be seen as an alternative to traditional doctoral programmes because they provide the economy with professionally qualified doctors of philosophy (Fink, 2006, p. 35).

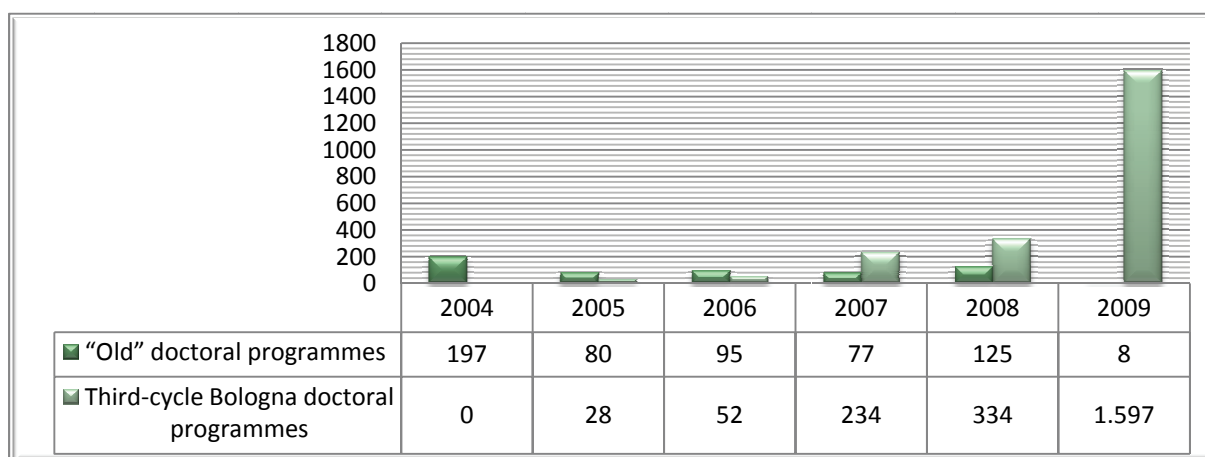
Doctoral studies can offer an opportunity to work in the economy as well as higher education. However, when choosing a doctoral programme, the needs and demands of the labour market should be taken into account from two points of view, i.e. that of the individual choosing the programme, and that of the institution offering the programme. Individuals should take into account market demands and conditions as well as the added value of their programme, while

higher education institutions offering doctoral programmes should take into account the expectations of the labour market and society as a whole.

2. DOCTORAL STUDIES IN SLOVENIA – ENROLMENT, GRADUATES AND EMPLOYMENT

In this chapter, we will conduct an overview of the state of doctoral studies in Slovenia. In accordance with the Bologna Declaration guidelines, the Higher Education Act (ZViS-UPB2) was adopted in 2004. With it, the Slovenian higher education entered the process of creating the European higher education area. A new structure of studies was introduced, i.e. first-cycle undergraduate studies (academic and professional higher education study programmes), second-cycle postgraduate studies (Master and uniform Master study programmes), and third-cycle postgraduate studies (Doctorate of Science). “Doctoral study programmes provide students with an in-depth understanding of theoretical and methodological concepts, and prepare them for the independent development of new knowledge, for solving the most challenging problems through testing and improving already known and discovering new solutions, for managing the most complex work systems and scientific research projects in a wide professional and academic field, and for the development of critical reflection” (ZViS-UPB2, Article 33). According to the 2006 Higher Education Act (ZViS-UPB3), graduates of “old”² academic higher education study programmes can enrol in third-cycle doctoral study programmes (MVTZ). This has undoubtedly had an impact on the significantly increased enrolment in doctoral programmes, another important factor being the fact that “old” academic higher education degrees were made equal to “Bologna” Master degrees which means that doctorate of science is the only option to continue studies in a vertical direction.

Figure 1: Enrolment in the first year of doctoral studies in the period from 2004/2005 to 2009/10



- Enrolment in the first year
- Data on student enrolment, recorded as of 15 October, for a certain year (e.g. 2009) refers to the respective academic year (e.g. 2009/10).

Source: Statistical Office of the Republic of Slovenia

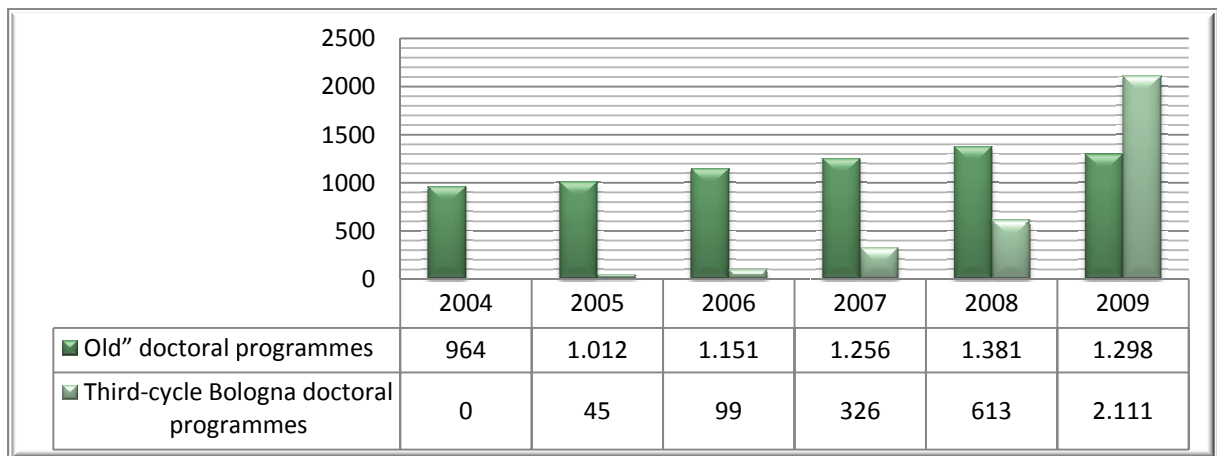
First students enrolled in Bologna doctoral study programmes in 2005/2006 (see Figure 1). The number of students enrolled has been increasing in all the observed periods. However, the

² In terms of doctoral studies, the following modification introduced by this Act is also important (MVZT):

- individuals who have completed pre-Bologna academic higher education study programmes can enrol in third-cycle doctoral study programmes.

first mass enrolment in Bologna doctoral study programmes was recorded in 2009/2010, with 1,263 more students enrolled compared to the previous academic year.

Figure 2: Students enrolled in doctoral studies in the period from 2004/2005 to 2009/10

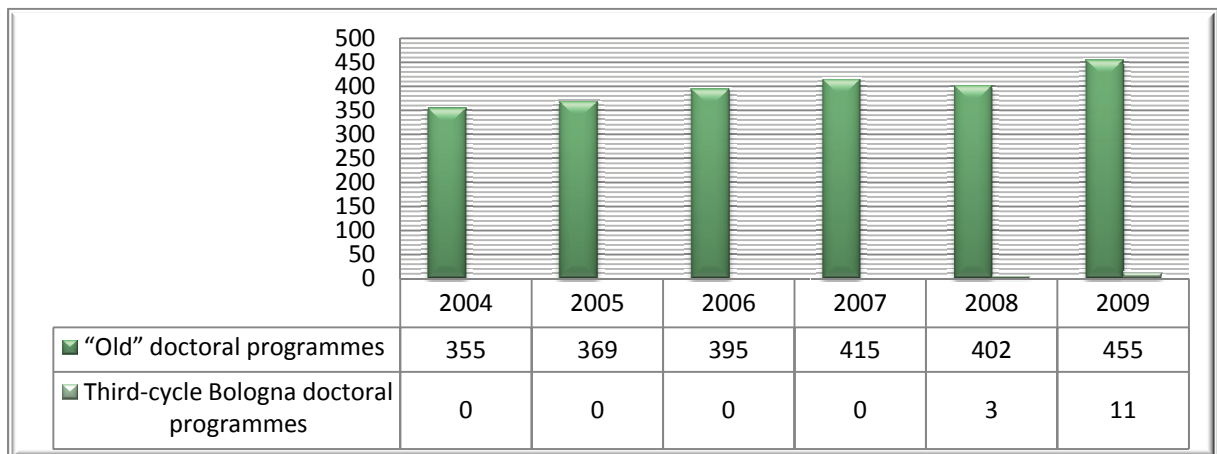


- Data on student enrolment, recorded as of 15 October, for a certain year (e.g. 2009) refers to the respective academic year (e.g. 2009/10).

Source: Statistical Office of the Republic of Slovenia

The data on the number of students enrolled in doctoral studies (see Figure 2) from 2004/2005 to 2009/2010 shows the largest increase in the enrolment in Bologna doctoral study programmes in 2009/2010, with 1,498 more students enrolled than in the previous academic year.

Figure 3: Graduates of doctoral study programmes



Source: Statistical Office of the Republic of Slovenia

The number of doctors of philosophy has also been increasing. As shown in Figure 3, in the period observed most doctoral students completed their studies in accordance with the old, pre-Bologna system. In 2009, there were 455 graduates of old doctoral programmes and 11 of new, Bologna doctoral programmes. Slovenia has a small percentage of doctors of philosophy per inhabitant compared to the developed countries of the European Union (NPVS, 2010, p. 4). The fact that the number of doctors of philosophy and the enrolment in doctoral studies in Slovenia have been increasing is positive news for the country. However, as noted in the

National Higher Education Programme 2011-2020, such enrolment took place “without suitable selection of students on the basis of necessary skills, and without taking into account the capacities of higher education institutions for quality implementation of doctoral studies” (NPVS, 2010, p. 17).

Table 2: Percentage (%) of doctors of science employed in various sectors³

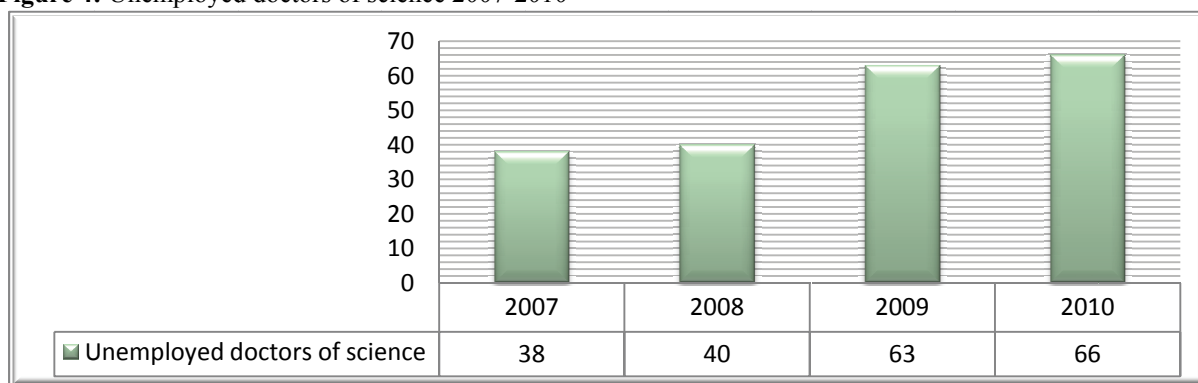
Year	Business sector	Public sector	Higher education sector	Private sector
2001	6.3	29.7	62.7	1.4
2005	7.4	26.2	66.2	0.2
2007	9.6	29.0	61.1	0.2
2008	10.1	29.7	60.0	0.3

Source: MVZT – 1, 2010, p. 13.

Since doctors of philosophy are key actors in creating knowledge society, it is necessary to promote their employment in the economy, and adapt doctoral study programmes to the needs of the labour market and the new role of doctors of philosophy in society. The data for all the periods observed shows that in Slovenia the largest share of doctors of philosophy are still employed in the higher education sector and the lowest share in the business and private sectors (see Table 2). In 2008, 60% of doctors of philosophy were employed in the higher education sector, compared to only 0.3% in the private and 10.1% in the business sector. From the number of students enrolled in doctoral studies (see Figure 1) we can conclude that the higher education sector cannot recruit all future doctors of philosophy. Therefore, it is even more important to promote their employment in the private and business sectors through study programmes offering broader training (Probst & Lepori, 2008, p. 479). Statistics also show that the number of unemployed doctors of philosophy has been increasing (see Figure 4). Due to the possibility to work in the economy, it is particularly important that their studies prepare them for careers in various sectors, not only in higher education.

³ According to the Frascati methodology (Statistical Office of the RS), a) Business sector consists of companies whose primary activity is market production of goods and services to be sold at a price which should cover at least the costs. The core of the sector consists of profit and non-profit companies. It also includes public companies in the frames of economic public services which sell the same types of goods and services as private companies, but their prices can be lower than the full costs of production due to the pricing policy. It also includes private non-profit institutes which are market-oriented producers of goods and services. b) Public sector includes publicly controlled non-financial corporations, other units of central and local government, and direct users of the state budget (SASA). These are institutes, central hospitals, museums, central libraries and other organisations which in addition to their core activity, which is not R&D, carry out scientific and developmental research work. c) Private non-profit sector consists of private non-profit institutions serving private persons and households. They are funded by the founder in the form of gifts in nature, and partially by companies and the state. They also include private researchers. d) Higher education sector consists of universities and other institutions carrying out post-secondary education, regardless of the source of funding. It also includes research institutes, experimental units and clinics under direct supervision by public higher education institutions.

Figure 4: Unemployed doctors of science 2007-2010



Source: MVZT – 1, 2010, p. 13.

In 2007, there were 38 unemployed doctors of science; their number grew to 66 in 2010.

3. CONCLUSION

Today, doctoral studies are “increasingly under pressure due to major changes in higher education and wider socio-economic environment” (Enders, 2004, Kehm, 2005, 2007, in Probst & Lepori, 2008, p. 47). Slovenia needs doctors of philosophy who will with new knowledge and innovations turn Slovenian society into knowledge society. Our paper provides some data on the enrolment in and graduates of doctoral studies, and the employment of doctors of philosophy. We believe that we need thorough market analyses and the modernisation of study programmes that will prepare future doctors of philosophy for development and research work in various sectors. Doctoral studies should not only become more applied, but should also prepare future doctors of philosophy for research work, particularly research in the economy. We can see that the majority of doctors of philosophy in Slovenia are still employed in higher education, but the situation is gradually changing. This trend and the awareness of the need to promote the education and employment of doctors of philosophy in the economy is also evident from various documents, e.g. the 2006 scheme for young researchers from the economy, the National Higher Education Programme 2011-2020, and the 2010 scheme for co-funding doctoral studies which provides for the co-funding of doctoral candidates who “in the frames of their doctoral studies carry out research related to the economy or solving of contemporary societal challenges” (RISS 2010, p. 17), etc.

Our paper can serve as a starting point for further analysis, as it raises a number of issues to be considered in the future, i.e. whether professional doctoral programmes should be introduced in Slovenia or not, what the demands and needs of the labour market are and how doctoral programmes should be adapted to meet these needs, etc. Today, a doctoral degree is no guarantee for a job in higher education or the economy, so the decision to enrol in doctoral studies should be well thought over. It can be an excellent opportunity for creative individuals with passion for research, teaching and learning. Depending on the intelligence and resourcefulness of each individual, doctoral studies might or might not be a business opportunity since today “being bright is not enough⁴”.

⁴ From the manual for doctoral students written by Peggy Hawley and entitled “Being Bright Is Not Enough: The Unwritten Rules of Doctoral Study”.

REFERENCE LIST

1. Auriol, L. (2010). *Careers of Doctorate Holders: Employment and Mobility Patterns*. Working paper: Organisation for Economic Co-operation and Development, Directorate for Science, Technology and Industry. Retrieved from <http://www.oecd.org/dataoecd/46/43/44893058.pdf>
2. Carter, S., Fazey, J., González Geraldo, J. L. & Trevitt, C. (2010). The doctorate of the Bologna Process third cycle: Mapping the dimensions and impact of the European Higher Education Area. *Journal of Research in International Education*, 9(3), 245–258.
3. Commission of the European Communities – COM (2003). Communication from the Commission. *The role of the universities in the Europe of knowledge*. Retrieved from <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2003:0058:FIN:EN:PDF>
4. Fink, D. (2006). The Professional Doctorate: Its Relativity to the PhD and Relevance for the Knowledge Economy. *International Journal of Doctoral Studies*, 1(6), 35–44.
5. Gül, H., Gül, S. S., Kaya, E. & Alican, A. (2010). Main trends in the world of higher education, internationalization and institutional autonomy. *Procedia Social and Behavioral Sciences*, 9(10), 1878–1884.
6. *Higher Education Act (ZViS-UPB2)*. Official Gazette of RS, no. 100/2004. Retrieved from <http://www.uradni-list.si/1/objava.jsp?urlid=2004100&stevilka=4325>
7. Ministry of Higher Education, Science and Technology (MVZT). Retrieved from <http://www.mvzt.gov.si/>
8. Ministry of Higher Education, Science and Technology (MVZT - 1). (2010). *Human resources in research and development activities in Slovenia*. Retrieved from http://www.mvzt.gov.si/fileadmin/mvzt.gov.si/pageuploads/doc/dokumenti_mednarodno/Studije/Cloveski_viri_2010.pdf
9. National Higher Education Programme of the Republic of Slovenia 2011–2020 (NPVS). 2010. Retrieved from http://www.mvzt.gov.si/fileadmin/mvzt.gov.si/pageuploads/pdf/odnosi_z_javnostmi/8.9.10_NPVS.pdf
10. Nokkala, T. (2006). Knowledge society discourse in internationalisation of higher education. Case study in governmentality. *Revista Española de Educación Comparada*, 12(6), 171–201.
11. Park, C. (2005). New Variant PhD: The changing nature of the doctorate in the UK. *Journal of Higher Education Policy and Management*, 27(2), 189–207.
12. Probst, C. & Lepori, B. (2008). What is a Doctorate? Changing Meanings and Practices in Communication Sciences in Switzerland. *European Journal of Education*, 43(4), 477–494.
13. Research and Innovation Strategy (RISS), Slovenia 2011–2020. 2010. Retrieved from http://www.mvzt.gov.si/fileadmin/mvzt.gov.si/pageuploads/pdf/odnosi_z_javnostmi/RISS-osnutek.pdf
14. *Statistical Office of the Republic of Slovenia*. Retrieved from <http://www.stat.si/>
15. The Economist. (2010). *Doctoral degrees: The disposable academic*. Retrieved from <http://www.economist.com/node/17723223>
16. Usher, R. (2002). A diversity of doctorates: fitness for the knowledge economy? *Higher Education Research and Development Journal*, 21(2), 43–154.
17. Valimaa, J. & Hoffman, D. (2008). Knowledge society discourse and higher education. *Higher Education*, 56(3), 265–285.