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Bargsted, Mariana

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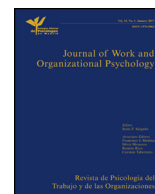
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# Impact of personal competencies and market value of type of occupation over objective employability and perceived career opportunities of young professionals



Mariana Bargsted\*

Adolfo Ibáñez University, Chile

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## ABSTRACT

The research of employability shows tension in the social field of career, where variables such as market value, gender, and personal skills are important. The aim of this study was to identify the predicted weight of market value of type of occupation, sex, and career competences (self-efficacy, pro-activity, and locus of control) over objective employability and perceived opportunities for a future career and satisfaction of young professionals. In this study, 294 graduates from 27 different undergraduate degree programs participated, describing their labor situation, satisfaction with career opportunities, and their level in the studied competences. Each type of occupation has a specific market value score, according to national and international criteria. It was possible to identify that the market value of their occupations had significant effects on objective employability ( $p < .000$ ,  $f = .48$ ). Also, self-efficacy and locus of control were significant predictors of perceived employability opportunities ( $p < .000$ ,  $f = .26$ ). This predictive value of personal variables was different between males ( $p = .011$ ,  $f = .82$ ), and females ( $p < .000$ ,  $f = .34$ ), and between occupations with low market value ( $p = .016$ ,  $f = .45$ ), medium market value ( $p < .000$ ,  $f = .34$ ), and high market value ( $p = .006$ ,  $f = .21$ ), which allows the development of specific intervention strategies to promote equality in labor opportunities and job placement.

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## El impacto de las competencias personales y del valor de mercado de la profesión en la empleabilidad objetiva y la percepción de oportunidades de carrera en profesionales jóvenes

## RESUMEN

La investigación sobre la empleabilidad permite advertir la tensión en el campo social de las carreras laborales, donde son importantes variables como el valor de mercado, el género y las habilidades personales. El objetivo de este estudio fue identificar el valor predictivo de competencias de carrera profesional (autoeficacia, proactividad y locus de control), el sexo y el valor dado por el mercado a las profesiones, tanto sobre la empleabilidad objetiva, como sobre las oportunidades percibidas de empleabilidad y desarrollo de carrera de jóvenes profesionales. Participaron 294 graduados de 27 titulaciones diferentes, quienes respondieron un cuestionario respecto de su situación laboral, satisfacción con las oportunidades de carrera y las competencias personales estudiadas. Cada profesión obtuvo un valor de mercado de acuerdo a criterios de nacionales e internacionales ampliamente usados. Fue posible identificar que el valor de mercado dado a las profesiones tiene efecto significativo sobre la empleabilidad objetiva ( $p < .000$ ,  $f = .48$ ). Además, autoeficacia y locus de control fueron predictores significativos de las oportunidades de empleabilidad percibidas ( $p < .000$ ,  $f = .26$ ). Este valor predictivo de las competencias personales fue diferente en hombres ( $p = .011$ ,  $f = .82$ ) y mujeres ( $p < .000$ ,  $f = .34$ ) y en profesiones con valor de mercado bajo ( $p = .016$ ,  $f = .45$ ), medio ( $p < .000$ ,  $f = .34$ ) y alto ( $p = .006$ ,  $f = .21$ ). Estos resultados permiten desarrollar

### Palabras clave:

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\* Corresponding author. Avda. Diagonal Las Torres 2640. Peñalolén. Santiago de Chile.

E-mail address: [mariana.bargsted@uai.cl](mailto:mariana.bargsted@uai.cl)

estrategias de intervención específicas para promover la igualdad en las oportunidades laborales.

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To study employability it is important to analyse the substantive changes in labor environment, especially in work relationships, and the protagonist role of persons in their own career. There is no doubt that the effects of globalisation are many and complex, and that capital moves freely around the global village. It increases economic fragility through the impact of mobility, technology, and the interdependence between markets. Therefore, nations' competitiveness grows as a function of the abilities and knowledge of their workforce (Santos, Guillén, & Montalbán, 2012).

Also, work market and labor force have changed. At a demographic level, population is getting older as a consequence of a lower birth rate and a higher life expectancy (Fouad, 2007). In addition, there is more migration from less stable countries, with cultural and social implications that demand clarity of policies to integrate immigrants.

Regarding the workforce's composition, there are, at least, four particular situations to be aware of. First, people have more qualification (though in some countries there is a deficit of qualified workers in the productive process). Second, a higher number of women are entering the workforce in increasingly diverse roles. Third, there are a higher proportion of families or couples with both members working while maintaining family responsibilities. And fourth, the active population is older, as people are leaving work life after retirement for economic or social needs (Potgieter, 2012).

Therefore, organizations require more specialization and more technological, social, and knowledge management skills from their workers (Greenhaus, Callanan, & Godshalk, 2010). Even more, new jobs are generated in more qualified positions, with a requirement of greater mobility but less stability.

### From Work Stability to Employability

There is also an important shift in the way people mean their jobs, thus, how they develop their career. In that sense, career cannot be understood only as a sequence of jobs and responsibilities in one organization in an ascendant path. Changes of jobs, organizations and even of work field are common in careers (Misra & Mishra, 2011). According to this, experts have noted that a person will have 7 or 10 different jobs in their lifetime, and their work relations will last, on average, 2.7 years (Greenhaus et al., 2010). In Chile, for example, it is estimated that more than 40% of the workforce will lose or change their work within twelve months, and just 17.4% can be considered as an old worker, with more than 10 years working for the same organization (Instituto Nacional de Estadística de Chile - INE, 2011). All this information enlightens a significant lack of job security or stability.

This has an impact on employer-employee relationships. The idea of loyalty and organizational commitment decreases. Nowadays, organizations value performance and abilities, both anchored in lifespan learning, the development of employability and self-efficacy, instead of centering their attention on job security and paternalism (De Vos, De Hauw, & Van der Heijden, 2011). Today, workers tend to be strongly engaged with their own projects and, when they change jobs or organizations, they prioritize the nature of work, an open communication, and the effects on their personal lives more than economic benefits (Greenhaus et al., 2010). So, it is possible to note that the prime aspects to evaluate a job as positive are intrinsic work aspects, development opportunities, income and, in a lower position, job security and work schedule.

### Employability

The word employability is not new in organizational and vocational psychology. However, it is still unknown in several fields (Rentería & Malvezzi, 2008). When reviewing the origin and uses of this concept, it is possible to see that there are at least three different, but not exclusionary, views about it. The first came from a clinical context, referring to labor re-insertion of patients with physical or mental disease. The second one alludes to a quality indicator of higher education. Regarding this, Harvey (2001) pointed out that it is too limited to reduce employability to the proportion of graduates getting a job after school. The author suggested adopting a perspective that includes considering information about how graduates got these jobs, with some long-term indicators and a broader definition of employability.

The third perspective to understand employability is closely related to career concept changes. Regarding this, Fugate, Kinicki, and Ashforth (2004) pointed out that the concept of employability could be extended to a proactive management of one's own career. In this way, employability is conceived as a multidimensional form to adapt, actively and specifically, to the work environment. This allows workers to identify and get career opportunities. It is an integrative concept that not only includes maintaining a job, but also implies job satisfaction and long-term career success with objective and subjective indicators of this employability (Cuyper, Van der Heijden, & De Witte, 2011; Fugate & Kinicki, 2008; Van der Heijde & Van der Heijden, 2006).

Fugate et al. (2004) defined employability as a construct centred in personal factors: career identity, personal adaptability, and human and social capital. There are two meta-skills: proactivity and career identity. The first, as a general attitude, is the key for adaptation and career management and the second one, career identity, will be crucial to orient employability, driving toward an active adaptation and integrating human and social capital (Nazar & Van Der Heijden, 2012). In this sense, in the psychological literature, it is possible to see that employability in understood as a complex psychosocial phenomenon.

However, in governmental spaces, employability is studied as work or labor insertion (named also as work placement). Every year education ministries, statistics centres, and other entities of several countries analyse and publish occupations rankings according to the probability of obtaining a job in six months or a year after graduation, and the expected income. It is possible to see this approach in Latin America ("Graduate Follow up and labor insertion, CINDA, 2012), Spain ("Labor insertion survey of university graduates", INE, Spain, 2014), and USA ("50 Highest paying career for college graduates"; see [www.collegechoice.com](http://www.collegechoice.com)). In Europe, Australia, and OECD-ILO there is a wider approach. They stimulate actions to improve employability by developing more technical and professional skills. For example, Graduate Employability, a centre commissioned by the Australian Government Office for Learning, defines graduate employability (based on Kinash, Crane, Judd, & Knight, 2016) as the possibility that higher education alumni had developed the capacity to obtain or create work, but also the knowledge, skills, attributes, and identity to succeed in workforce.

According to this point of view, employability is not just as a probability to get a job and some expected income and, on the other hand, seeing employability only from a personal perspective may mislead us. As Rentería and Malvezzi (2008) analysed, it is

critical to adopt a dual vision that includes different social actors, the tension between demands and market needs, and personal skills. If we understand employability as described before, it is important to note that market factors will affect objective conditions related to employability like incomes, contract durations, work conditions, hierarchical advances, etc. Therefore, if it is hard to control, is it pertinent to study employability?

Just under these conditions, it is critical to include a complex point of view about employability. Like a career, employability reflects an objective-subjective duality (Bargsted, 2008). On one hand, it is related to stability, income, organizational hierarchy, and contract terms, i.e., visible aspects of career, labor insertion and employability. On the other hand, employability alludes also to getting opportunities to develop competencies, experience work satisfaction, meet challenges, and conciliate work with other personal roles (Santos et al., 2012). This aspect had received several names, like subjective employability or perceived employability.

In the study of subjective employability, Van Der Heijde and Van der Heijden (2006) have an interesting research perspective related to perceived employability. Santos et al. (2012) offered a conceptualisation of perceived employability as an inner analysis of opportunities to develop subjective career issues (Bargsted, 2008), in a similar way of the statements of Kirves, Kinnunen, and De Cuyper (2013) regarding perceived employability concerning worker's beliefs about being employable. This is the perspective adopted in this study, focusing on the subjective experience and level of satisfaction with the objective aspects (income, decision level, job security) of employability, and with perceived expectations about professional development.

In times of economic turbulence, the market will offer dissimilar opportunities to get a high level of objective employability over time and between occupations. In consequence, the critical aspect to reach better and more stable work relationships will be the perceived opportunities of getting a better employability and career development. Thereby, it will be the anchor to guide and direct careers, with lots of opportunities or scarcity of these. With this idea in mind, it will be necessary to deepen the key elements to

improve perceived employability, insofar as the first objective has a low controllability by the person. From an analysis of the literature, I propose a comprehensive model of employability, as shown in Figure 1.

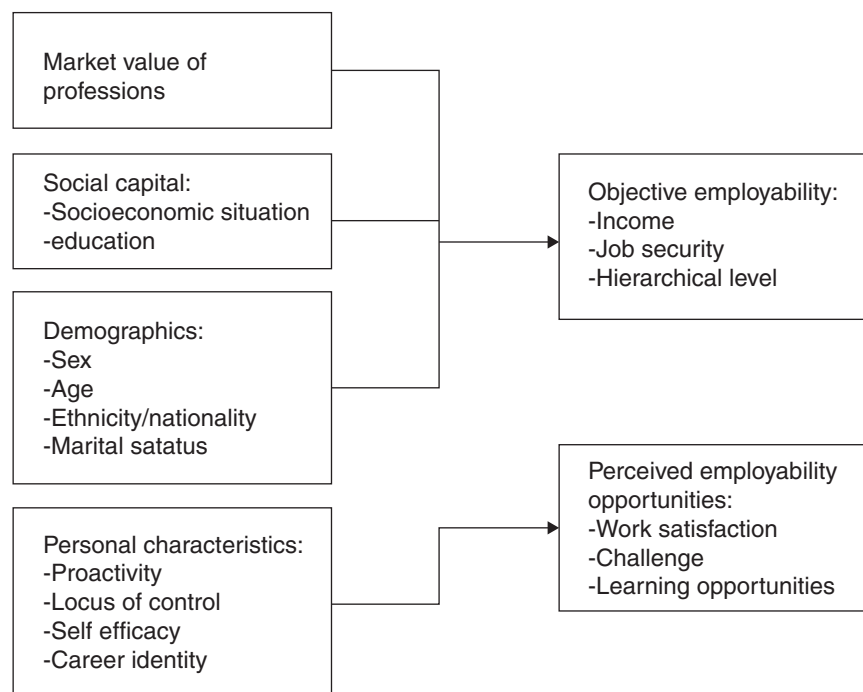
According to the model, both aspects of employability are explained by different factors. The objective employability will be more determined by market value of occupations and social capital. In the model, demographic variables were included because in each social context there will be opportunities and limitations related to them, legal and also due to a discrimination or undervaluation of certain social groups. Unfortunately, in some countries there are still several obstacles to equality in job opportunities, especially related to gender or minorities (Nazar & Van Der Heijden, 2012). Therefore, three hypotheses of this study are related to differences in objective employability and sex:

H1. Participants with high market-valued occupations will have higher scores in objective employability compared to medium and low market-valued occupations. This can be explained for a main effect of market value of occupations over objective employability (both related to income and job placement).

H2. Men will present higher scores in objective employability than women. Unfortunately, there are still great differences in job opportunities and income between men and women. In the Latin-American context, for example, the gender gap in work is still very large, specifically in more educated population (Global Gender Gap Report; World Economic Forum, 2016).

H3. Sex and market value of occupations will interact, especially in medium market-valued occupations. Thus, men of medium market-valued occupations will have higher scores in objective employability than women, but there will not be differences by sex within the group of participants who had high market-valued occupations.

I expect the main effect of occupations' market value over objective employability to suppress the gender effect; however, in the case that the market value effect is lower, the gender effect will emerge. In consequence, I expect that men will have higher objective employability in occupations with lower market value than women.



**Figure 1.** Proposed Employability Model based on Fugates et al's. (2004) Multidimensional Definition of Employability and Perceived Employability Definition Given by Santos et al. (2012).

On the other hand, personal characteristics will have an important role in perceived employability opportunities, especially in aspects related to career identity and self-concept, according to socio-cognitive career theories, such as those developed for [Lent, Brown, and Hackett \(2000\)](#).

Before explaining these personal aspects that can affect employability, it is necessary to frame the analysis with a reflection present in careers about the tension between person and society. The structural determinism and the extreme voluntarism are two poles that emphasize the importance of social structures or the free volition of the social actor. Those poles are present in the study of employability, and maintaining these two perspectives will enrich this study.

[Maryhofer, Meyer, Iellarchirch, and Schiffing \(2004\)](#) proposed a discussion from the Bourdieu theory. From this point of view, it is possible to see how employability is also an expression of tension related to determinism and personal agency, i.e., between the individual level and the social level. So, these statements of [Maryhofer et al. \(2004\)](#) and [Rentería and Malvezzi \(2008\)](#) invite us to include a multilevel analysis in the research, observing simultaneously agency and structure, perceived and objective employability, social hierarchies and inequity, without quitting a macro-, meso-, or micro level of analysis.

This view of careers goes further from a transactional perspective and from traditional concepts of job, type of occupation, profession, and organization. Instead, career is focused on the interplay between personal agency and the set of transversal practices. With this frame in mind, we can integrate personal aspects that are relevant to employability. According to the literature, self-concept and others socio-cognitive aspects as core self-evaluations ([Judge & Bono, 2001](#)) seem to be more relevant to improve employability. Specifically, self-efficacy, pro-activity, and control attributions are elements that allow people to improve objective employability and perceived opportunities ([Akkermans, Brenninkmeijer, Huibers, & Blonk, 2013](#)).

### Personal Factors Related to Employability

[Arnold \(2001\)](#), indicated that self-concept is highly relevant for career development and, therefore, for employability. This is still an important object to study ([Nazar & Van Der Heijden, 2012](#)). [Onishy, Enwereuzor, Ituma, & Tochukwu \(2015\)](#) stated that personal resources as core self-evaluations has important effects in organizational behavior. Also, there is some evidence indicating that high core self-evaluations are related to high self-esteem, emotional stability, self-efficacy, and internal locus of control ([Judge & Bono, 2001](#)). As [Onishy et al. \(2015\)](#) could not find a direct relation between core self-evaluations and perceived employability, in this study the personal factors included were self-efficacy, proactivity, and locus of control. Particularly, the inner beliefs regarding personal ability to achieve specific goals affect decisions making processes, perception of our own competencies, roles, and opportunities taken ([Hernández-Fernaund, Ramos-Sapena, Negrín, Ruiz de la Rosa, & Hernández, 2011](#)).

Self-efficacy is one of the most studied aspects of self-concept. [Betz \(2004\)](#) defined it as the proper beliefs about the capabilities to get involved successfully in a specific behavior. To [Bandura \(2001\)](#), these beliefs about one's own competency regulate the human function through cognitive, affective, motivational, and decisional processes. Particularly, Bandura proposed three consequences of self-efficacy expectations: a) approach or avoidance behaviors, b) effects on performance and, c) effects on persistence against difficulties/obstacles. These expectations are specific; it means that they have a particular and significant behavior referent ([Betz,](#)

[2004](#)). That is why it is possible to find self-efficacy expectations about several issues, like work, academic, and social contexts.

Self-efficacy is a central topic in the socio-cognitive theory about self-regulation. In this theory, human behavior is explained by personal agency, personal pro-activity to process, learning, and developing behavior beyond reaction. [Bandura \(2001\)](#) pointed out that self-regulation is based on a dual discrepancy system: reactive discrepancy and proactive discrepancy. The first one alludes to avoiding discrepancies and adjusting behavior when they occur. However, the authors insisted that human motivation is centred, mainly, on a proactive control. So, it is possible to see a cycle where self-efficacy expectations lead to setting challenging goals and developing strategies to achieve these goals, to the extent that the discrepancy is managed. When the goals are achieved, people increase their perceived self-efficacy, and tend to set even more challenging goals. If people only seek for discrepancy reduction, when they achieve their goals, their next proposed goal would have the same level of challenge or difficulty. [Bandura and Locke \(2003\)](#) revisited several meta-analytic studies about self-efficacy, and they concluded that there is enough evidence to say that self-efficacy expectations have an impact on the aspiration level and in strategic thinking.

We can see clearly how self-efficacy expectations have an important role in setting general and specific goals. For more than 20 years, [Betz \(2004\)](#) has studied the effect of self-efficacy on career decisions, especially on women. [Lent et al. \(2000\)](#) proposed a socio-cognitive career theory centred on these statements. From this research tradition, it is settled that self-efficacy affects two aspects of careers. In the first place, it affects the range of career options: the greater the self-efficacy beliefs, the broader the career options that people explore. Secondly, self-efficacy expectations influence career decision-making: people with fewer career self-efficacy beliefs show more indecision and have more problems developing a clear career identity ([Betz, 2004](#)). Finally, with higher self-efficacy expectations, people have a more confident attitude and persist in the social field of employability ([Hernández-Fernaund et al., 2011](#)).

A second personal factor, related to the former one, is proactivity. It is considered a key element in employability. Proactivity is a personal characteristic that impulses and encourages the adaption to changes. It implies a personal disposition to initiate changes in several situations ([Bindl & Parker, 2010](#)). Specifically, proactivity is related to developing preventive measures to face personal and context changes ([Grant & Ashford, 2008](#)).

[Crant and Bateman \(2000\)](#) indicated that proactivity is a personality attribute centred in change because individuals are constantly seeking for environmental modification. The central aspects of proactivity are anticipation and action. Therefore, proactivity is not only being flexible and adaptable to the future, but it also demands taking initiative and acting, to seek new opportunities ([Bindl & Parker, 2010](#)). [Frese and Fay \(2001\)](#) called proactivity "personal initiative", referring to work behavior characterized by a proactive approach and a perseverance to face difficulties and to reach goals.

So, we can conclude that these proactivity concepts emphasize the ability to act oriented to the future, and to add improvements to the environment. In this sense, it would be a personal characteristic that allows people to anticipate changes, opportunities, and threats inside labor market and, from there, develop actions to increase their employability.

Finally, another key cognitive factor related to core self-evaluations is locus of control. As [Oros \(2005\)](#) said, self-efficacy and locus of control are both beliefs about control. The first one is related to achievement and the second one to causes. While there is an extensive discussion about the multidimensionality of the locus of control construct, there is clarity about how complex it is to incorporate all the dimensions. So, it is, at least, indispensable



to include an internal-external dichotomy. Oros defined internal locus of control as a personal conviction that every day events are results of efficacy of personal behavior, of their abilities and efforts. On the contrary, external locus of control is based on a personal conviction that those results are not related to personal behavior, but they depend on luck, opportunities, other people's power, or even fate.

There is evidence regarding the idea that internal beliefs of control have positive effects on several domains. In employability and work domains, Oros (2005) reported effects on job quality, job satisfaction, lower emotional distress, and lower conflicts rates. Also, internal locus of control is related to entrepreneurship, work attitude, and, especially, to efforts dedicated to improve social capital and personal competencies.

In consequence, these personal competencies can improve perceived employability opportunities in the extent that these abilities allow us to make more efforts against difficulties, to anticipate obstacles, and to persevere in the attainment of personal goals. Therefore, they could improve perceived employability.

H4. Self-efficacy expectations, locus of control and proactivity are predictors only in the case of perceived employability opportunities.

Finally, the expected principal effect of market value implies that personal characteristics studied could have more effects over employability in the extent that market value is lower. Furthermore, these personal characteristics could impact differently according to sex, especially when the main effect of market value were less, i.e., in lower levels of market value. Therefore, H5 summarizes the expected predictive power of these personal characteristics over both types of employability measured in this study.

H5. The predictive power of personal characteristics (self-efficacy, locus of control, and proactivity) over objective and perceived employability will be different depending on market value and sex.

As a conclusion of this literature review, employability must be approached in a complex view, both investigating and intervening. We can see the effects of market variables that are uncontrollable and volatile. We can also find effects of socio-demographic variables that are consequences of work and social inequity. And, finally, it is possible to see the effects of personal factors, moderating or compensating those market and socio-demographic factors. Therefore, it will be relevant to analyze the predictive role of these elements, both objective and perceived employability opportunities. This could impact on several psychological practices relative to the interface between education and work placement, facilitating a better insertion process of young human capital like job application, recruitment, assessment, selection, and job induction.

## Method

To empirically approach employability, I developed a quantitative study in order to identify certain relationship patterns between the research variables. As employability is sensitive to the educational level and the work experience level, these variables were fixed, and the study was focused on young graduates. This implies that it is not possible to generalize the results to other populations, but it allows identifying specific areas of intervention in the university's educational process, especially in work placement at the beginning of professional career.

## Participants

Two hundred and ninety-four young graduates participated in this study (from Universidad Católica del Norte, Chile), with two or three years of work experience. The whole graduated population

**Table 1**

Participant Distribution by Sex and Market Value Classification.

	Market Value			Total
	Low	Medium	High	
Sex				
Male	22	74	43	139
Female	14	108	33	155
Total	36	182	76	294

was 1,627 individuals from 41 undergraduate degree programs. Participants were from 27 different undergraduate degree programs, of which 47% were women. The average age was 23.31 years old ( $SD = 2.8$ ); 72.6% had a job and 67% spent fewer than 6 months looking for a job.

To contact participants I used the graduates' database from the last two years. Once they updated their e-mail addresses, they received a message indicating the aim of the study, a link to an online survey, and an informed consent document. Data were collected within a period of three months.

## Instruments

The predictors in the study were: the market value of the type of occupation, sex, work self-efficacy, proactivity, internal and external locus of control. As dependent variables, objective employability and perceived employability opportunities were included.

The market value of the occupations had three levels: high, medium, and low. This value was obtained from the last categorization made by the Chilean government in the research centre "Futuro.cl". The occupations with high market value were: Mining Engineering, Metallurgic Engineering, Industrial Engineering, Mechanics Engineering, Economics, Construction, and Medicine. The medium level included: Law, Nursing, Chemistry, Teaching, Architecture, Psychology, Nutrition, Kinesiology, and Aquaculture. The lower level encompassed: Science degree, Biology and Journalism. Table 1 presents the participant distribution by sex and market value.

To assess personal characteristics, a survey with three scales was used:

- The Spanish version of the Professional Efficacy Scale, created by Salanova, Grau, Llorens, and Shauffeli (2001). This scale has 10 items in a six-point Likert scale. The original authors reported  $\alpha = .84$  of internal consistency, and in this research we observed  $\alpha = .96$ .
- The Spanish version of the Proactive Personality Scale, developed by Claes, Beheydt, and Lemmens (2005). It is a ten-item scale, with a five-point Likert format, with an internal consistency of  $\alpha = .84$ . In this study, it was  $\alpha = .91$ .
- Locus of control. A ten-item scale developed from a COE Survey (Sanchez, 2010), in a five-point Likert format. It included three dimensions: internal locus of control (3 items), external locus of control (4 items), and luck (3 items). The reliability of each dimension was  $\alpha = .846$ ,  $\alpha = .82$  and  $\alpha = .88$ , respectively.

To measure employability, I built a questionnaire based on a former survey (Alda, Bargsted, & Terrazas, 2004). This scale included two dimensions: objective employability and perceived employability opportunities, with 15 items in mixed format. Objective employability was measured with three indicators: a) income (monthly average of income in current job), b) organizational level (organizational position and influence in decision-making), and c) stability (kind of contract, time in organization, and time in the current position). Similarly, perceived employability opportunities had three indicators: a) satisfaction with the current income, job

**Table 2**  
Means, Standard Deviations, and Correlations between Variables.

	Mean	SD	1	2	3	4	5	6	7
1. Market value of occupations	-	-	-						
2. Self-Efficacy	6.11	1.066	.155**	-					
3. Proactivity	4.09	0.66	.122*	.704**	-				
4. Internal locus of control	4.52	0.69	.093	.659**	.696**	-			
5. External locus of control	1.98	0.81	-.076	-.055	.003	-.043	-		
6. Beliefs in luck	2.18	0.91	-.076	-.001	-.022	.018	.604**	-	
7. Objective employability	3.11	0.71	.480**	.090	.014	-.025	-.105	.040	-
8. Perceived employability opportunities	3.79	0.65	.263**	.434**	.339**	.368**	-.252**	-.082	.190*

Note.  $N = 294$ . The market value of occupations is an ordinal variable.

\*  $p < .05$ , \*\*  $p < .01$ .

and stability (present employability expectation), b) congruence between occupation and job position, and c) perception of further development (expectation of future employability).

Both objective employability and perceived employability opportunities were subsumed into two general indicators, based on the sum of the specific indicators. The indicators of objective employability can be understood as the cause of it, not as determined by objective employability. Therefore, this is a formative measure and it is not possible to estimate the covariance of the items, neither the internal consistency. On the other hand, perceived employability items reflect the construct and, consequently, is a reflective measure, and the internal consistency is an appropriate indicator of reliability. The internal consistency of perceived employability opportunities was  $\alpha = .86$ .

In order to contrast these hypotheses, ANOVA, linear regression modeling, and general linear modeling were made, using SPSS 18.0.

## Results

In this section, research results are presented in the established order of the hypothesis proposed. Table 2 shows correlation between market value of occupations, personal characteristics, and employability.

Regarding the first research hypothesis, using the ANOVA procedure I compare objective employability and perceived employability opportunities among the three groups defined by the market value of their occupations. On the contrary to what was proposed, significant differences were identified in both aspects of employability, as reported in Table 3. It was possible to identify that the higher market-value group has higher objective employability and perceived employability opportunities as compared to the other two groups. But between medium and low market value there were differences only in objective employability.

As we can see in Table 3, even though both ANOVA analyses are significant, only in case of objective employability the effect size and the statistical power are high. In conclusion, Hypothesis 1 is maintained because it was possible to identify a main effect of market value of occupations over objective employability.

Also, I calculated mean differences between male and female participants in both kinds of employability. In neither case differences were found. In consequence, Hypothesis 2 is rejected.

Now, to analyze the interaction between the market value of the occupations and sex, I conducted in the first place a chi-square analysis to see if these two variables were related. The results show that the male/female proportion was similar within the high market-value group, but not in the other two groups. In the medium group 60% were women, and in the low group, 38%,  $\chi^2 = 8.732$ ,  $p = .013$ ,  $\omega^2 = .75$ . Once this was identified, I conducted factorial ANOVAs for both dimensions of employability.

In the case of objective employability, a main effect of market value was identified and also interaction effect between sex and market value, as it is showed in Tables 4 and 5. However, for perceived employability opportunities there was no interaction effect, only the main effect of market value.

Going deeper to explore the interaction observed in the case of objective employability, it was possible to identify significant differences between men and women in both medium,  $t(108) = 2.481$ ,  $p = .015$ ,  $d = 0.48$ , 95% CI[0.065, 0.58], and high level,  $t(38) = 2.835$ ,  $p = .007$ ,  $d = 0.92$ , 95% CI[0.11, 0.68]) of market-value. These results can be seen in Figure 2.

In conclusion, in occupations with high and medium market valuation men have higher objective employability, but these effects are not present in perceived employability opportunities. As proposed, market and demographic variables would have a more significant impact on objective employability. However, these effects are visible not only in medium market-value occupations (Hypothesis 3), but also in high market-value occupations.

Finally, personal characteristics were included as predictors of employability, using linear regression analysis with the stepwise method. As I proposed in Hypothesis 4, it was not possible to identify valid models for objective employability, i.e., self-efficacy, locus of control, and proactivity are not predictors of it. Nevertheless, a predictive model to perceived employability opportunities was identified, with self-efficacy and locus of control as predictors (see Table 6).

To explore possible differences in predictive power of personal characteristics according to sex and market value (Hypothesis 5),

**Table 3**  
ANOVAs Analysis for Employability between Market-value Groups.

	Sum of Square	df	Mean Square	F	Sig.	f (effect size)	Power (1- $\beta$ err prob)
<i>Objective employability</i>							
Between groups	20.455	2	10.228	25.643	.000	.486	.99
Within groups	65.809	165	0.399				
Total	86.264	167					
<i>Perceived employability opportunities</i>							
Between groups	5.972	2	2.986	7.402	.001	.084	.046
Within groups	66.962	166	0.403				
Total	72.934	168					

**Table 4**

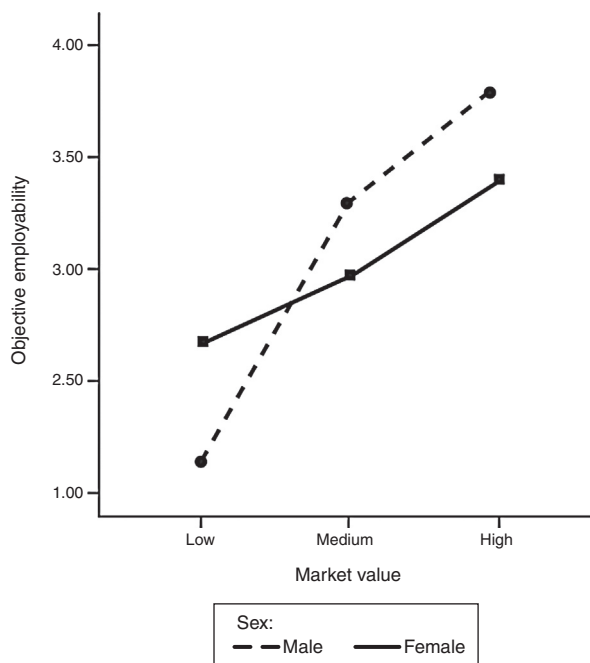
Factorial ANOVAs for Objective Employability, according to Sex and Market-value of Occupations.

Source	Type III Sum of Squares	df	Mean Squared	F	Sig.	$\eta^2$	f (effect size)	Power (1- $\beta$ err prob)
Corrected Model	25.810 <sup>a</sup>	5	5.162	13.833	.000	.299	.65	1.000
Intercept	851.893	1	851.893	2282.822	.000	.934		
Sex	0.099	1	0.099	0.264	.608	.002	.044	.088
Market-value	16.461	2	8.230	22.055	.000	.214	.52	.99
Sex * market-value	2.781	2	1.390	3.726	.026	.044	.21	.69
Error	60.454	162	0.373					
Total	1717.528	168						
Corrected total	86.264	167						

Note. <sup>a</sup>  $R^2 = .299$  (adjusted  $R^2 = .278$ ).**Table 5**

Factorial ANOVAs for Perceived Employability Opportunities, according to Sex and Market-value of Occupations.

Source	Type III Sum of Squares	df	Mean Squared	F	Sig.	$\eta^2$	f (effect size)	Power (1- $\beta$ err prob)
Corrected Model	6.092 <sup>a</sup>	5	1.218	2.971	.014	.084	.30	.865
Intercept	1353.170	1	1353.170	3299.829	.000	.953		1.000
Sex	0.075	1	0.075	0.183	.669	.001	.031	.067
Market-value	5.655	2	2.827	6.895	.001	.078	.29	.928
sex*market-value	0.108	2	0.054	0.132	.877	.002	.044	.075
Error	66.842	163	0.410					
Total	2501.654	169						
Corrected total	72.934	168						

Note. <sup>a</sup>  $R^2 = .084$  (adjusted  $R^2 = .055$ ).**Figure 2.** Factorial Modelling for Objective Employability Including Sex (male and female) and Three Levels of Market Value of Occupations.

several linear regression analyses were conducted splitting the sample by both factors, as has been described in Table 6. The significant models related to objective employability had a small effect size, because the main effect of market value. But in the case of perceived employability opportunities, the models obtained a medium and also a large effect size.

As we can see, for the low market-value group internal locus of control predicts perceived employability opportunities. For the medium market-value group external locus of control is a predictor of objective employability and self-efficacy is a predictor of perceived employability opportunities. And finally, for the high

market-value group, there are not models for predicting objective employability, and external locus of control predicts (in an inverse sense) perceived employability opportunities.

On the other hand, using sex as a splitting criterion, for women external locus of control is a negative predictor of objective employability and self-efficacy is a positive predictor of perceived employability opportunities. For men, internal and external locus of control (in different directions) is a predictor of perceived employability opportunities.

## Discussion

In the first place, according to results it is plausible to say that employability is a complex social phenomenon where market, demographic, and personal variables interact intensely. Undoubtedly, the market value given to each occupation has a direct impact on the employability of young professionals (Kirves et al., 2013; Qenani, MacDougall, & Sexton, 2014).

In this research the interaction between variables of different levels was also evaluated, such as social (market-value), demographic (sex), and personal level (core self-evaluations). It is interesting to realize how it was possible to obtain wrong conclusions if we only included one kind of aspect. For instance, if we only analyzed sex differences, we could conclude that there are no differences. But when the market-value variable was included, some differences appeared and there were also expressions of gender inequities that underlie or are even mixed with employability differences related to the market value of occupations. Conducting a study like this is useful to acknowledge the complex interaction of these variables and encourage us to go deeper in developing social policies and educational practices to decrease the gap observed between men and women, and also between occupations.

In addition, these findings let us conclude that personal variables included have different predictive power according to the market value of occupations, sex, and the dimension of employability studied. From this point, it is possible to design and implement programs of high specificity, which will be relevant and effective because of their focus on key elements of each particular group. In



**Table 6**  
Regression Models Observed for Objective Employability and Perceived Employability Opportunities, regarding Sex and Market Values and Using Personal Competencies as Predictors.

Dependent Variable	Group	$R^2$	Adjusted $R^2$	Std. Error of Estimate	Model					
					Predictors	Standardized B	t	Sig.	Durbin-Watson	f <sup>2</sup>
Objective employability	Female	.069	.059	.602	External locus of control	-.262	-2.648	.009	1.782	.074
	Med. Market-value	.036	.027	.661	External locus of control	-.190	-0.202	.046	1.601	.037
Perceived employability opportunities	General	.219	.209	.585	Self-efficacy	.333	4.206	.000	1.764	.26
					Internal locus of control	.201	2.538	.012		
	Female	.264	.256	.593	Self-efficacy	.514	5.836	.000	1.995	.34
	Male	.220	.198	.557	Internal locus of control	.304	2.604	.011	2.351	.28
					External locus of control	-.254	-2.176	.033		
	Low Market-value	.311	.268	.528	Internal locus of control	.558	2.688	.016	2.985	.45
	Med. Market-value	.255	.211	.597	Self-efficacy	.438	5.064	.000	1.754	.37
	High Market-value	.179	.158	.483	External locus of control	-.423	-2.917	.006	1.673	.21

that sense, it will be necessary to deepen what men and women of different market-value occupations mean, evaluate, and get in labor market. Even more, we have realized that self-efficacy can be a better predictor of perceived employability opportunities in women, and locus of control can be better for men.

Furthermore, it is necessary to ask about the role of different educational institutions. On one hand, they must be aware of the demands of productive sectors, but they must also maintain a long-term view about the needs of the country, in order to offer sustainability to growth and development. In this sense, to dedicate public policy, as seen in Chile, to inform people about objective employability, and to classify occupations as to their future profitability can be a double-edged sword. They can lead to the instrumentalization of career choice, which will have a negative impact on the future satisfaction with profession and career (Greenhaus et al., 2010). To avoid this effect, public policies must be accompanied by a strategic long-term view (Qenani et al., 2014).

With the evidence of this research, institutions of higher education can settle differentiated strategies to increase objective employability and perceived employability opportunities. If they are aware about the important influence of the market value of occupations, they can develop specific plans to smooth these effects. For low market-value occupations, it is possible to stimulate internal locus of control, and for medium market valued occupations, self-efficacy can be a key aspect to improve employability.

Also, is possible to conclude that we have more opportunities to improve perceived employability opportunities, i.e., the actual and future expectations of having a good job. For men who had low market-value occupations, the strategy must be centered on developing an internal locus of control regarding their opportunities and career progressions. For women and occupations with medium market value, the increase of beliefs about their own abilities and competences can improve both objective and perceived employability opportunities.

As a final conclusion, the inclusion of specific strategies could be a way to reverse the determinism imposed on us by market valuation. In specific situations, this obeys specific economic interest, but not necessarily long term community needs and demands. In consequence, in times of economic growth it is more critical to establish some compensation strategies to the primacy of productive and service sector over other sectors like education, health, arts, and science. Then employability will be seen not only as the ability to find and maintain a job, but also as a social strategic stimulation of a wide variety of career opportunities to access in more equal conditions.

## Conflict of Interest

The author of this article declares no conflict of interest.

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