گۆڤاری کوردستانیی بۆ لێکۆڵینەوەی ستراتیجیی

Investigate the role of Certain Explanatory Variables on Risk Aversion and Sorting among Employees in Iraqi Kurdistan

Soran Zaher Abdullah

soran.zaher@charmouniversity.org

Ismael Majeed Ismael

Ismael.majid@charmouniversity.org

Business Administrations Department, College of Business, Charmo University. Soran, Kurdistan Region, Iraq.

Abstract

`Understanding the significance of the risk attitude on sorting between public and private workers helps policymakers in introducing reforms in the labor market regulations that prevent oversized public sector jobs and encourage selection into private sector jobs. The current study attempts to assess the role of certain factors such as gender, type of employment and work training on risk aversion among employees in the Kurdistan region of Iraq. Given that public sector jobs provide higher job security than private sector jobs, workers' risk attitudes can be an important determinant of sector choice. The data of the study was collected from a sample of 300 fourth-stage evenings shift college students from the universities of Sulaimani, Charmo University and Sulaimani Polytechnic University who have already been employed in either the public or private sector. The results of the study indicated that the models containing Gender, Employment type and Work Training as predictors were significant for some of the risk aversion and sorting, particularly 20% and 10% of risk aversion. One-third of risk aversion was found to be related to gender, suggesting that males had reported the aforementioned risk more than females. However, no statistically significant associations were found between 50% of risk aversion and all the independent variables.

Keywords: Self-employment, training, Sorting, Risk Aversion, Public and Private Sectors.

Introduction:

Public-sector labor markets caught significant attention from labor market economists due to their size and their distinct characteristics and objectives that guide decision-making. It is common for public sector employment to dominate most of the labor markets in Middle Eastern countries. According to the Kurdistan region labor force statistic (Abramzon et al., 2014) the number of individuals ages 15 and over in the labor force and not currently enrolled in school was approximately 1.2 million in 2012. Services make up 59.8% of all sectors in the region, which is vastly dominated by the public sector (CIA, 2015). Public sector employment makes up more than 50% of Kurdistan's labor force (Group, 2015). Since 2014, the Kurdistan Regional Government (KRG) has been facing a serious deficit in its budget, and a relatively large public sector wage contributes to extracting about 65% of the national budget annually. This may not be an ideal situation, but fixing it requires a better understanding of workers' sector choices and motivations. Thus, understanding the graduates' motivations for sorting differently into public or private sector jobs is important.

It has been argued that the preferences and work motivations of public sector employees differ from those of private sector employees. Such a risk attitude can be a major explanation of the sector choice. Kurdistan's public sector has long contracts, low volatility and some unique job amenities that are only given to public sector workers, such as housing and loan assistance for married employees. Job security motivation in the public sector is avoidance of risk and it's known that risk-averse individuals have a higher appreciation for employment security; therefore, the more risk-averse workers tend to sort themselves into public sector employment given that employment security is larger in the public sector than in the private sector. This type of sorting has been found previously (Pfeifer, 2011).

Studying the risk attitude of the public and private workers in Kurdistan and its correlation with the sorting into public and private sectors will help us understand one of the potential reasons for the relatively growing number of public sector jobs compared to private sector jobs. This paper is possibly the first attempt to quantify the risk attitude and its impact on the sector job selection in Kurdistan-Iraq. The data collected and the paper's analysis of risk aversion and its effect on sorting gives the researchers and Kurdistan's labor market regulators a better vision to design the most suitable policy to encourage individuals to sort more into the private sector. The results of this paper can determine the extent of the importance of job security in determining sector choice. This paper will potentially provide a useful tool for public policymakers in Kurdistan to implement reforms in labor market regulations. This will make private sector jobs more attractive by increasing job security through reforms in pension law and enforcing the protection of private sector employees. Therefore, this paper aims to investigate the role of certain explanatory variables, including gender, employment type, self-employment and work training on risk aversion and sorting among evening shift college students. It also aimed to examine the differences in the amount of risk aversion based on each of the independent variables.

Related Literature

There is a significant amount of literature discussing the motives of sorting into public sector jobs. One possibility is that workers' interest is driven by the public service motivation (PSM) theory (Francois, 2000). PSM explains some of the workers' motivations for sorting into the public sector-run private sector, such as it provides them with a desire to serve the public. The PSM's importance is driven by the ability to explain the sector choice.

Such as, why working with government and non-profit sectors may be more desirable despite higher payment in the private sector jobs. This relates to the notion that individuals are attracted to work in public service because it allows them to do good for others and society. In other words, workers choose the public sector because of an altruistic motivation to serve the interests of a community of people, a state, a nation or humankind (Francois, 2000). On the other hand, Krueger and Schkade (2007) have found that more extroverted workers tend to sort in jobs that require greater social interaction as it gives them more satisfaction, this may relate to the nature of the public jobs in Kurdistan that requires more interaction with others and public than the private sector jobs.

An alternative hypothesis is risk aversion prospection. Hanna (2001) and Roszkowski and Grable (2009) conducted a study to test whether workers in both the public and private sectors are different in risk preferences; this was generated by using online survey responses to a series of hypothetical investment questions with carefully specified scenarios varying in their risk aspects. The researchers asked certain questions about investment choices under different levels of risk and they ranked the risk attitude of public sector workers from the investment choices. It was concluded that public sector employees scored lower on a test of financial risk tolerance compared to their counterparts in the private sector. This evidence stayed valid even after controlling for demographic variables related to risk tolerance. It has been argued that the public sector wage is lower than the private sector as the public sector is mainly to provide public welfare rather than maximizing yield on investments (Pfeifer, 2011). In addition, job security is another reason that workers in the public sector accept lower wages. Luechinger (2007) found evidence that sorting into public sector jobs increases the well-being gains for the risk-averse workers due to higher employment security than the private sector jobs. He also explains that the high wages of the private sector are to compensate for the lower employment security. Some other empirical evidence by Dohmen and Falk (2011) showed that the self-sorting between either accepting fixed hourly or per piece pay is correlated with the worker's productivity as well as their risk attitude.

Empirical Strategy

The empirical strategy is to examine the correlation between risk attitudes and the probability of public or private sector job selection. To answer the research questions, a series of regression analyses were conducted. One may be concerned that individuals may not have the choice to sort into different sectors due to a lack of private sector jobs. Oil revenues account for over 75 per cent of GDP and 95 per cent of government revenue in Kurdistan (Snapshot, 2014), which makes the national budget subject to the risk of oil price volatility. This reveals an urgent need to minimise the size of the public sector share of the labor market employment. Statistics show that there is potential growth in the private sector led by foreign direct investment. For instance, there were more than 1,000 Turkish companies registered in 2012, and Turkish construction companies are using an estimated 30,000 Turkish workers (Al-Jazeera, 2012), which shows a significant growth in the private sector labor demand filled by foreign workers. As economic data indicate, the private sector labor demand grew by 60% between 2008 and 2009, which means that its contribution to GDP increased (KRG, 2012). On the education side, the number of students in public higher education increased from 66,042 in 2008-2009 to 76,446 in 2009-2010, a growth of about 15.75%. Meanwhile, the number of students in private universities increased from 3,772 in 2008-2009 to 8,735 in 2009-2010, a growth of about 131.5%.

Thus, we can use the above as arguments supporting the existence of education and job sector choice given the ability and education. However, the reality is that only 20% of all jobs are in the private sector (Abramzon et

al., 2014). This might be due to a lack of desirable skills among public college graduates. This raises questions about whether the system has been designed for sorting or learning. Our interest is to net out the effect of risk attitude on sorting into sectors. We also suspect that our variable of interest (risk attitude) is possibly correlated with other individual characteristics. For instance, gender is associated with more risk aversion across sectors. Nelson (2012) concludes that women may not be more risk-averse than men. Hence, explaining the differences in risk attitude between men and women will help us better understand the magnitude of the difference in job sector selection across genders and sectors.

Methodology:

The data of this study was collected from evening shift college students, in the university of Sulaimani, Charmo University and Sulaimani Polytechnic, who have already been employed in both the public and private sectors. Using the Purposive Sampling Method, three hundred fourth-stage evening shift students (100 students in each University) were chosen to participate in the current study. A survey by Roszkowski and Grable (2009) was utilized to obtain the data which includes a set of independent variables on a wide range of work-related topics, such as gender, employment conditions, self-employment and work. The survey also contained six hypothetical income loss questions estimating risk tolerance. To address our research question clearly, we restrict our sample only to be from public and private workers, taking (1) if public and (0) if he or she is in the private sector. The coding was also similar for other independent variables, giving value (1) if the individual is male and (0) if female, value (1) if the individual is self-employed and (0) if non-self-employed; the value of (1) was also given to those who had already taken work training and (0) if he or she didn't take the work training.

Results:

Regression analyses were carried out to determine the relationship between independent variables and risk aversion and sorting. As shown in Table (1) the result showed that Gender (β= .17, t= 2.94, P value= .004, Employment type, β= -.15, t= 2.56, P value= .011, and work Training, β= .16, t= 2.20, P value= .03) were significantly related to twenty percent of risk aversion and sorting. These findings suggest that 0.08% of the variance in twenty per cent of risk aversion and sorting is explained by these three independent variables. However, Self-Employment, β= -0.02, was found to be not significantly related to the twenty per cent risk aversion.

Looking more closely at the differences between the levels of each independent variable in the 20% risk aversion, the researchers conducted a series of Mann-Whitney tests. The finding showed that males (mean rank=169.8) tend to take higher twenty risk than females (mean rank=144.3), Z= 2.54, P value= .011). Regarding the differences in Employment type, the result of the Mann-Whitney test revealed that individuals who work in the private sector (mean rank=162.3), reported higher risk than those who work in the public sector (mean rank=134.8), Z= 3.02, P value=.001). In addition, individuals who had taken work training (mean rank=180.12), showed higher risk aversion than those who didn't obtain work training (mean rank=145.5), Z= 2.85, P value= .005). Nevertheless, no statistically significant difference was noticed in taking risk aversion between self and non-self-employed persons.

Table 1 Regression coefficients and Beta weights for the association between independent variables and twenty

per cent risk aversion

Model	Unstandardized Coefficients		Unstandardized Coefficients	t	Sig
	B	St. Error			
Gender	0.19	0.06	0.17	2.94	0.004
Employment type	-0.15	0.05	-0.15	2.56	0.011
Self-Employment	-0.04	0.12	-0.02	-0.32	0.74
Work Training	0.22	0.10	0.16	2.20	0.030

Moreover, the researcher directed three questions regarding different amounts of risk aversion (i.e. 10%, 8% and 5%) for those who answered "NO" for 20% of risk aversion. Concerning the 10% of risk aversion and sorting, the results of regression analyses showed that Gender (β= -.19, t= -2.15, P value= .033), was significantly related to ten percent of risk aversion and sorting, indicating that 0.05% of the variance in ten percent of risk aversion and sorting is account for by gender. However, the rest of the independent variables were found to be non-significantly associated with the ten per cent risk aversion and sorting.

To find out who scored higher in ten percent of risk aversion, the result of Mann-Whitney test revealed that female (mean rank=67.6) tends to take higher ten percent risk than male (mean rank=55.0), Z= -2.20, P value= .028), whereas no significant differences were found between the level of each of Employment type, Self-Employment and Work Training.

Looking at the 8% risk aversion, the result of regression analysis showed no significant associations between the independent variables and 8% risk aversion and sorting.

Table 2 Regression coefficients and Beta weights for the association between independent variables and ten per cent risk aversion

Model	Unstandardized Coefficients		Unstandardized Coefficients	t	Sig
	B	St. Error			
Gender	-0.18	0.08	-0.19	-2.15	0.03
Employment type	0.04	0.06	0.06	0.67	0.51
Self-Employment	0.19	0.19	0.12	0.98	0.32
Work Training	-0.09	0.16	-0.07	-0.56	0.58

Table 3 Regression coefficients and Beta weights for the association between independent variables and eight per cent risk aversion

Model	Unstandardized Coefficients		Unstandardized Coefficients	t	Sig
	B	St. Error			
Gender	-.032	.099	-.029	.328	.743
Employment type	.120	.074	.140	1.610	.110
Self-Employment	.147	0.92	.161	1.71	.131
Work Training	.350	.193	.219	1.81	.072

Regarding 5% risk aversion and sorting, the result of regression analysis showed no significant relationship between the independent variables and five per cent risk aversion.

Moreover, the researchers conducted a regression analysis to find the association between the independent variables and one-third of risk aversion and sorting. The result showed that gender was the only factor that was significantly related to one-third of risk aversion (β= .14.6, t= 2.50, P value= .013). This finding suggests that 0.027% of the variance in one-third of risk aversion and sorting is accounted for by the individual's gender. However, no statistically significant association was found between other independent variables and one-third of risk aversion.

Table 4 Regression coefficients and Beta weights for the association between independent variables and five per cent risk aversion

Model	Unstandardized Coefficients		Unstandardized Coefficients	t	Sig
	B	St. Error			
Gender	-.067	0.11	-.053	.594	.554
Employment type	-.001	.085	-.001	-.010	.992
Self-Employment	.017	.262	.008	.066	.947
Work Training	.249	221	.140	1.12	.262

To look at the gender differences, the result of Mann-Whitney test also showed that males (mean rank=170.1) tend to take a higher one-third risk than females (mean rank=144.2), Z= -2.56, P value= .010).

Table 5 Regression coefficients and Beta weights for the association between independent variables and one-third of risk aversion

Model	Unstandardized Coefficients		Unstandardized Coefficients	t	Sig
	B	St. Error			
Gender	.170	.068	.146	2.507	.013
Employment type	.012	.060	.012	.205	.838
Self-Employment	.140	.127	.080	1.10	.271
Work Training	-.014	.105 -	.010 -	-.132	.895

Finally, as shown in the table below, the result of regression analysis showed that there was no significant relationship between independent variables and fifty per cent of risk aversion and sorting.

Table (6)Regression coefficients and Beta weights for the association

between independent variables and fifty per cent of risk aversion

Model	Unstandardized Coefficients		Unstandardized Coefficients	t	Sig
	B	St. Error			
Gender	.060	.064	.056	.951	.342
Employment type	-.035	.057	-.037	-.035	.537
Self-Employment	-.097	.119 -	.060 –	.817	.415
Work Training	.031	.099	.023	.312	.755

Overall, the results of the regression analysis indicated that the models containing Gender, Employment Type and Work Training as predictors were significant for some of the risk aversion and sorting, particularly 20% and 10% of risk aversion.

Discussion:

The current study aimed to find the relationship between certain independent variables and risk aversion among evening shift college students who have already been employed in both the public and private sectors. The findings showed that gender, employment type and work training are statistically associated with 20% of risk aversion. Regarding the role of gender, the finding further illustrated that male tends to take a higher twenty per cent risk than female. One possible explanation for this result might be that males in Kurdish society have more freedom compared to females, which in turn causes them to increase their work experiences and find job opportunities. This is supported by Nelson (2012) whose study concluded that male has taken more risk aversion than female. Besides, those who worked in the private sector reported a higher twenty percent risk than their counterparts. This could be because employment security or future job assurance is considered to be larger in the public than in the private sector (Pfeifer, 2011). In addition, the public sector is regarded by many as less demanding than the private sector. Also, the public sector has long contracts, low volatility and some unique job amenities such as housing and loan assistance for married employees. This finding is consistent with the study conducted by Hanna (2001) and Roszkowski and Grable (2009) who concluded that public sector employees scored lower on a test of financial risk tolerance compared to their counterparts in the private sector. Furthermore, individuals who had taken work training showed higher risk aversion than those who didn't obtain work training. This is supported by Fairlie and Holleran (2012) whose study found that individuals who were more risk tolerant benefited more in entrepreneurship training than less risk-tolerant individuals.

Moreover, a series of regression analyses were conducted for those who answered "NO" for 20% of risk aversion and were asked to answer (10, 8 and 5% of risk aversion questions only). Concerning 10% of risk aversion, the result revealed that only gender has a significant role in the aforementioned risk. However, no statistically significant association was found between other independent variables and ten per cent of risk aversion. The finding further indicated that females reported higher ten percent risk aversion than males. A possible explanation for this result could be related to the low amount of the risk which made females feel confident to report this risk. Nevertheless, the findings showed no significant role of each of the independent variables on 8% and 5% of risk aversion. The low level of the risks could be a possible reason for this result which in turn led all individuals reporting the risk relatively similar.

On the other hand, those who answered "Yes" for 20% of risk aversion were advised to answer the questions related to one-third and 50% of risk aversion. The result showed that gender was the only factor that was significantly related to one-third of risk aversion in favour of male, suggesting that male tends to take a higher risk than female. One possible reason for this finding may be that males have more freedom and more opportunities to obtain different types of jobs in the future. The difficulty in finding a preferable job among females, the high level of risk and the stress associated with losing their current job could be possible factors that made females not report one-third of their risk aversion. Regarding 50% risk aversion, there was no statistically significant as-

sociation between independent variables and this risk aversion. The possible reason could be that fifty per cent is not a stress-free risk. Therefore, it is very difficult for individuals to confidently take a risk that has half a chance of losing their current job.

In conclusion, the findings suggest that those who work in the private sector and have attended work training tend to take higher risks than their counterparts. Concerning the gender differences, males also reported higher risk than females, particularly in one-third of risk aversion. The present study however has some limitations. The study was limited to the evening shift college students which may not be generalized to other groups. Secondly, this study has focused on the association between the variables, and although regression analysis demonstrates the existence of a significant association between independent and dependent variables, causality cannot be attributed. Thirdly, there might be some confounding factors that affect the correlation between the study's variables and risk aversion, hence; further research needs to examine if there is any moderator in the relationship between risk aversion and other aforementioned variables.

پوخته

تێگەیشــتن لەگرنگــی و رای کارمەنــدان دەربــارەی مەترســی لەســەر جیاکردنــەوەی نێــوان کرێکارانــی گشــتی و تایبــەت یارمەتــی لایەنــی پەیوەندیــدار دەدات لــە ئەنجامدانــی چاکســازی لەبــازاری کاروکەمکردنــەوەی ڕووکردنەکەرتی گشتی وهاندانی تاکەکان بۆکارکردن لەکەرتی تایبەتدا. ئــەم توێژینەوەیــە هــەوڵ دەدات رۆڵــی کۆمەڵێک هــۆکاری وەک رەگــەز، شــوێنی کار (تایبــەت و گشــتی) و راهێنانــی کار(ئایا راهێنانی پێکراوە یان نــا) لەســەر ئەنجامدانــی مەترســی لەهەڵبژاردنــی کاری نوێــدا بدۆزێتــەوە. لەبەرئــەوەی کەرتــی گشــتی ئاســتی زامنبونــی زیاتــرە بــە بــەراورد بەکەرتــی تایبــەت، ئەنجامدانــی مەترســی بابەتێکــی گرنگــە لەدیاریکــردن وهەڵبژاردنــی ســێکتەرەکان لای تــاک. نموونــەی توێژینەوەکــە بەشــێوەیەکی بــە مەبەســت لای خوێنــدکاری قۆناغــی چوارەمــی ئێوارانــی زانکــۆ هەڵبژێــردران کــە هەریەکەیــان کاری تایبەتــی خــۆی هەبــوو لەکەرتــی گشــتی یــان تایبەتــدا. بــۆ ئــەم مەبەســتە ٣٠٠ راپرســی بەســەر خوێندکارانــی هەریەــەک لــە زانکــۆی ســلێمانی، چەرمــۆ وزانکــۆی پۆلەتەکنیک دابەشــکران. ئەنجامــی توێژینەوەکــە دەریخســت رەگــەز،جــۆری کار(تایبــە ت- گشــتی)، وە وەرگرتنــی راهێنانــی کار رۆڵــی هەیــە لــە دیــاری کردنــی هەندێــك لەنابەدڵــی مەترســی وپلەبەنــدی لای نمونــەی توێژینەوەکــە، بەتایبــەت ١٠٪، ٢٠٪ ی (دژی نابەدڵــی). هەروەهــا دەرکــەوت مەترســی ٣/١پەیوەنــدی هەیەبەرگــەزەوە بەوواتایــەی پیــاوان زیاتربەرگــەی مــه ترســی یــان بەرزتــرە لــە ٣/١ بەبــەراورد بەئافرەتــان . لەلایەکــی تــرەوە دەرئەنجامــی توێژینەوەکــە هیــچ پەیوەندیەکــی ئامــاری نەدۆزییــەوە لەنێــوان ٥٠٪ مەترســی گۆڕاوەســەربەخۆکانی توێژینەوەکــه.

ووشە کلیلەکان: کاری سەربەخۆ، راهێنان، بەرگەی مەترسی، کەرتی گشتی یان کەرتی تایبەت.

References

Abramzon, S., Burger, N., Ghosh-Dastidar, B., Glick, P., Kumar, K. B., Arce, F. P., & Smith, A. C. (2014). Capacity Building at the Kurdistan Region Statistics Office Through Data Collection. Rand Corporation

Aljazeera. (2012, July 2). Turkish investment boosts the Kurdish economy. Retrieved from AlJazeera://www.aljazeera.com/video/middleeast/2012/07/201272112230495894.html

CIA, C. I. (2015, March). The World Factbook. Retrieved from Central Intelligence Agency CIA: https://www.cia.gov/library/publications/the-world-factbook/docs/faqs.html

Dohmen, T., & Falk, A. (2011). Performance pay and multidimensional sorting: Productivity, preferences, and gender. The American Economic Review, 556-590.

Fairlie, R. W., & Holleran, W. (2012). Entrepreneurship training, risk aversion and other personality traits: Evidence from a random experiment. Journal of Economic Psychology, 33(2), 366-378.

Francois, P. (2000). 'Public service motivation' as an argument for government provision. Journal of Public Economics, 275-299.

Group, I. I. (2015). Overview: Kurdistan region of Iraq. Retrieved from human capital: http://www.investingroup.org/publications/kurdistan/overview/human-capital/

Hanna, S. D., Gutter, M. S., & Fan, J. X. (2001). A measure of risk tolerance based on economic theory. Financial Counseling and planning education, 12(2), 53-60

KRG, M. O. (2012, Dec 5). Ministry of Planning, Kurdistan Region. Retrieved from Ministry of Planning, Kurdistan Region: http://www.mop.krg.org/index.jsp?Sid=1&id=291&pid=274

Krueger, A. B., & Schkade, D. (2007). Sorting in the Labor Market: Do Gregarious Workers Flock to Interactive Jobs? The Journal of Human Resources, 860-883.

Luechinger, A. S. (2007). The Happiness Gains from Sorting and Matching in the Labor Market. WWZ-Discussion Paper, 26-27.

Nelson, J. A. (2012). Are Women Really More Risk-Averse than Men? Global development and environment institute, 28-29.

Pfeifer, C. (2011). Risk aversion and sorting into public sector employment. German Economic Review, 12(1), 85-99.

Roszkowski, M. J., and Grable, J. (2009). Evidence of lower risk tolerance among public. Journal of Occupational and Organizational Psychology, 453–463.

Snapshot, T. (2014). Natural Resource Governance Institute. Retrieved from Natural Resource Governance Institute: http://www.resourcegovernance.