UNIVERSIDAD CARLOS III DE MADRID

TESIS DOCTORAL

Teamworking under the Microscope: Employee Behavior, Job Design and Ideal Compensation System

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DEPARTAMENTO DE ECONOMIA DE LA EMPRESA

Getafe, Octubre 2011

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Acknowledgements

Looking back at the years of study for my PhD thesis I would like to acknowledge the support received along the way. First of all I want to thank my thesis director, Jaime Ortega Diego for his guidance, detailed supervision, understanding and comfortable talks. None of my efforts during this time would have been fruitful without his constant support. I learned from him the capacity to develop comprehensive analysis, to work in steps and to be patient and confident that good outcomes will come.

I would like to thank Miriam Sanchez-Manzanares for helping me with my research and dedicating her time to responding to my questions. I also appreciate the help received from Eduardo Melero, Isabel Gutierrez Calderon, Neus Palomeras Vilches, Ester Martinez Ros, Juan Romo, Pablo Ruiz Verdu and Clara Garcia Garcia. Even if Clara and I could not collaborate in the final steps of this thesis I hope we may have other opportunities in the future.

I want to thank Eric Molleman for his guidance while I was doing my visiting at the Department of Organizational Behavior and Human Resource Management from the University of Groningen. He helped me with several versions of my papers. I also appreciate the fruitful discussions and informal talks with Gerben Van der Vegt whose advice and keen mind have proven very useful to me. I thank Laeticia, Frouke, Ben, Yeliz, Darja, Nils, Serra and Roy from Groningen for their comments during my stay in The Netherlands and for making my research visiting happier and more colorful as I felt motivated to through the tough weeks of work and hours of solitude required in our profession. I also thank Margarita Mayo from Instituto de Empresa, Jos Benders and Petru Curseu from Tilburg University and Tanya Menon from Kellogg School of Management for their useful comments received at conferences. I take this opportunity to acknowledge as well the support and help offered by Teodora Barbu from the Academy of Economic Studies Bucharest. I also want to thank Iustina Boitan and Paul Tanasecu from the Academy of Economic Studies Bucharest and Smaranda Boros from Vlerick Leuven Gent Management School for their useful comments.

I am grateful for the unconditional support received from my family. I thank my parents, Ileana and Dan for their confidence and emotional engagement. I thank Marius,

my husband, for his understanding, interesting conversations which many times proved to be fruitful for my research and for making me laugh. I appreciate also the encouragement and help received from Maria, Florin, Emil, Mara, Coca, Mariana, Vicentiu and Vali.

A special thanks goes to my colleagues from Madrid: Silviu, Ana Laura, Fabrizio, Maria Cristina, Sofi, Agata, Argyro, Armen, PJ, Goki, Kenedy, Raluca, Geni, Patricia, Rebeca, Adolfo, Emanuele, Vardan and Belen with whom I enjoyed the Spanish lifestyle and had inspiring conversations. Some may remember how funny were the moments we spent in “el cuarto magico”, in the mountains or while playing volleyball near Plaza Eliptica.

Last but not least I appreciate the support received from my friends: Andra (for her comfortable talks “when the going got tough” or her enthusiasm while enjoying “la vie en rose”), Dana (who is also like a sister to me and seems to be virtually present each time I feel a bit low or need advice), Alex (who was here during an important moment for my thesis), Adriana, Mariana, Crina, Mr. Beleuz, Bogdan, Bahar, Tibi, Zulma, Anna, Cosmin, Irina, Victor, Andreea, Terry, Anca, Ana-Maria, Natalia and Ret, a very special person to me, also a PhD candidate who understood perfectly what I was going through, and somebody who is able to have an interesting talk late in the night about black holes and anti-matter. Sometimes, this kind of talk, not directly related to my field, can be very refreshing. I also want to thank Roxana Moisa for her help and TCCE for everything.

This research was made possible by research grants from the Spanish Ministry of Science and Innovation, ECO2009/08278, and from the Autonomous Region of Madrid, S2007/HUM-0413.

Remember upon the conduct of each depends the fate of all (Alexander the Great)

Table of contents

Abstract

Nowadays teams are used in almost any organization as they are able to respond adequately to the changes from the business environment. Thus, the focus of this thesis is to analyse team working thoroughly by looking at individual team members satisfaction, behaviour and career prospects. Only by investigating first the individuals we can get a proper picture of how the team is functioning as the sum of individual efforts, commitment and relationships among group members shape the actual team. Which are the compensation schemes preferred by the employees? Are there any other types of non-monetary rewards that contribute to higher satisfaction or helping behaviour? And does it really payoff to be part of a team in terms of increase cooperation among group members and potential promotions? These are the research questions that I plan to answer in my dissertation.

In the specific case of human resource management it is proper for companies to adapt their compensation systems to their team-based structures (Zobal, 1998; Shaw et al., 2001). However, there are few studies about the effect of the new compensation design on employee satisfaction and helping behaviour. In line with equity theory and theory of cooperation it is important to investigate which other variables that managers can control influence team members satisfaction and cooperation. However, most prior research has studied the relationship between perceived fairness with pay and job satisfaction (Donovan, Drasgow & Munson, 1998; Masterson et al. 2000; Haar & Spell, 2009; Casuneanu, 2010) but little is known about the specific effects of different types of compensation applied on team member satisfaction and citizenship behaviour.

Another variable considered to influence satisfaction and other positive work-related attitudes (i.e.cooperation), is autonomy, regarded by the literature as a non-monetary reward

(Lawler, 1971). Nevertheless, previous research was either theoretical (Predergast, 2002; Raith, 2008) or considered autonomy at individual level (Karasek, 1979; Ortega, 2009). Given that there are few studies that take into account the influence of autonomy at team level the focus of this thesis is to study the effects of both individual and team-based autonomy on employee behaviour, satisfaction and career prospects. The contribution of this dissertation resides also in the introduction of both types of autonomy which are explored in detail and expected to work like a buffer that compensates for potential injustices of the reward system.

While team working has proved to have advantages for productivity (Gomez-Mejia & Balkin, 1989; Hamilton, Nickerson & Owan, 2003), cooperation (Miller and Hamblin; 1963; Van der Vegt et al., 2003; Bamberger & Levi, 2009) and knowledge sharing (Siemsen, Balasubramanian & Roth, 2007) its effects on career advancement prospects received little attention. Furthermore and in line with employee learning theory and previous career development literature, the connection between productivity and promotion has been studied but the complex set of variables (at individual and group level) that affects advancement beyond this needs further investigation.

The data that I use in this thesis comes from the fourth European Working Conditions Survey conducted in 2005 by the European Foundation for the Improvement of Living and Working Conditions[1]. This survey provides an analysis of working conditions in the 27 countries of the European Union, in the two candidate countries (Turkey and Croatia), in Switzerland and Norway. In total, nearly 30.000 individual workers were interviewed in face-to-face interviews in their own homes between September and November of 2005, but I kept mainly the observations referring to employees working in a team.

[1] The source of the survey that provided my data it is available at: http://www.eurofound.europa.eu/ewco/surveys and it is based on a questionnaire containing a core of common questions, allowing meaningful comparisons to be made between this survey and previous editions. All interviews were conducted face-to-face in the respondent's own household; this was selected by starting from an assigned address and following a random walk procedure.

The focus of this thesis is the team member given that it is essential to understand individual behavior and expectations in order to understand work groups. Once inside the team, individual satisfaction, cooperation and career opportunities have to be carefully looked at, as through a microscope, in order to analyze the underlying factors which influence them. I attempt to address this central theme through three essays, each one exploring a different research question and using the same dataset described above.

Chapter 1 entitled *The Antecedents of Satisfaction with Pay in Teams: Do Performance-based Compensation and Autonomy Keep Team-members Satisfied?* aims to investigate the effects performance-based compensation and autonomy on satisfaction with pay in the context of team working. Given that previous literature suggests that organizations using team working should also change their compensation system accordingly, I aim at developing a complex perspective that considers the influence of different monetary and non-monetary rewards on satisfaction with pay. Drawing from agency theory, equity theory and theory of cooperation I predict that both piece rates and team-based rewards are associated with higher pay satisfaction. Moreover, I claim that autonomy in the form of both individual and team-based contribute to increased satisfaction with pay. Using a cross-sectional dataset of randomly selected European employees who are asked about specific working and living conditions, results confirm that both productivity based rewards and autonomy are important tools when it comes to determining employee satisfaction. Managers should know when to introduce rewards based only on individual merits so as to keep their workers motivated and when to give use autonomy as a buffer to compensate for potential fairness lacks in the payment system.

In **Chapter 2** entitled *The Determinants of Helping Behavior in Teams* I address the antecedents of helping behaviour in teams by looking at performance based compensation and autonomy. Given that previous literature has mainly examined each determinant separately, I aim at developing a complex perspective that considers their effect simultaneously. Using agency theory, social exchange theory and the theory of cooperation, I predict that piece rates and individual productivity payments decrease cooperation while and empowerment, at both individual and team level, leads to more helping behavior. This paper measures helping behaviour through the degree of assistance received by a team-member from other colleagues. We assume that workers receive help-from somebody else who may be called the good Samaritan- in two cases: first, when somebody else has something to gain if he or she offers help (for instance higher common reward or the perspective of receiving help himself) and second, when somebody else wants to help only because he or she can, this person being the Good Samaritan. I claim that a potential explanation that goes beyond compensation and autonomy refers to altruistic behaviour. Results yield support for the majority of the hypotheses confirming that managers could control their employees through either the compensation system or through autonomy in order to determine them to assist others. Practical implications are also identified and new directions for further research are proposed.

In **Chapter 3** entitled *Team Participation and Career Advancement* I study the relationship between team affiliation and career advancement. Given that previous literature has mainly examined the connection between productivity and promotion, it is interesting to analyze the complex set of variables that affect career prospects beyond this. Drawing from employee learning and career development literature I aim at investigating both the antecedents and consequences of team affiliation. I claim that both the level of education and tenure are

associated with team participation while inside the group, together with individual and team-based autonomy, they lead to high career advancement prospects. The findings suggest that managers may prefer to select in teams employees who are highly educated or have a large history and experience with the organization and once inside the team, team affiliation, individual autonomy, higher education and team discretion in the form of team freedom over the choice of the group leader contribute to high career prospects as expected. The implication regarding attaining further education is in line with findings from Arrow (1972), Spilerman & Lunde (1991) and Chao & Ngai (2001) who consider education credential as an important signal about employee level of competence.

Resumen en castellano

El foco de esta tesis es analizar el trabajo en equipo mirando a los miembros individuales del grupo la satisfacción, el comportamiento y perspectivas de carrera. Sólo mediante la investigación de los individuos podemos tener una idea correcta de cómo el equipo está funcionando siendo de hecho la suma de los esfuerzos individuales, el compromiso y las relaciones entre los miembros del equipo. ¿Cuáles son los planes de compensación preferidos por los empleados? ¿Hay algún otro tipo de recompensas no monetarias que contribuyan a una mayor satisfacción o al comportamiento de ayuda entre los miembros del grupo? Y realmente recompensa formar parte de un equipo en términos de incrementar la cooperación entre los miembros del grupo y promociones potenciales? Estas son las preguntas de investigación que tengo la intención de responder en mi tesis.

Los datos que utilizo en esta tesis vienen de la cuarta Encuesta europea sobre las condiciones de trabajo realizada en 2005 por la Fundación Europea para la Mejora de Vida y de Trabajo. Este estudio ofrece un análisis de las condiciones de trabajo en los 27 países de la Unión Europea, en los dos países candidatos (Turquía y Croacia), en Suiza y Noruega. En total, casi 30.000 trabajadores individuales fueron entrevistados en las entrevistas cara a cara en sus propias casas entre septiembre y noviembre de 2005, pero analice principalmente las observaciones que se refieren a los empleados que trabajan en equipo.

El objetivo de esta tesis es estudiar el miembro del equipo ya que es esencial para comprender el comportamiento individual y las expectativas a fin de entender los grupos de trabajo. Una vez dentro del equipo, la satisfacción individual, la cooperación y las oportunidades profesionales tienen que ser cuidadosamente examinados, como a través de un microscopio, con el fin de analizar los factores subyacentes que los influyen. Abordare este tema central a través de tres ensayos, cada uno explorando un tema de investigación diferente y utilizando el mismo conjunto de datos descrito anteriormente.

Capítulo 1 tiene como objetivo investigar los efectos de la compensación y la autonomía en la satisfacción individual con goce de sueldo en el contexto del trabajo en equipo. Teniendo en cuenta que la literatura previa sugiere que las organizaciones con trabajo en equipo también deben cambiar su sistema de compensación en consecuencia, quiero desarrollar una perspectiva compleja que tenga en cuenta la influencia de los diferentes premios monetarios y no monetarios en la satisfacción con goce de sueldo. Partiendo de la teoría de la agencia, la teoría de la equidad y la teoría de la cooperación mi predicción es que tanto a destajo y las recompensas basadas en el trabajo en equipo están asociados con la satisfacción más alta con el pago. Por otra parte, también afirmo que la autonomía tanto en la forma individual como en equipo contribuye a una mayor satisfacción con goce de sueldo. Los resultados, utilizando la base de datos descrita anteriormente, confirman que tanto la compensación basada en la productividad y como la autonomía son herramientas importantes a la hora de determinar la satisfacción del empleado. Los gerentes deben saber cuándo hay que introducir recompensas basadas únicamente en los méritos individuales con el fin de mantener a sus trabajadores motivados y cuándo usar la autonomía como un amortiguador para compensar posibles carencias en la equidad del sistema de pago.

En el capítulo 2 estoy analizando los antecedentes de la ayuda en equipos mediante la compensación basada en el rendimiento y la autonomía. Dado que estudios anteriores han examinado cada determinante sobre todo por separado, este ensayo apunta a desarrollar una perspectiva compleja que tenga en cuenta el efecto de las dos al mismo tiempo. Partiendo de la teoría de la agencia, la teoría del intercambio social y la teoría de la cooperación, predigo que los pagos individuales en función de la productividad disminuyen la cooperación, mientras que el empoderamiento, tanto a nivel individual como al de equipo, lleva a un comportamiento más ayuda. Este artículo mide el comportamiento de ayuda a través del grado de ayuda recibida por un miembro del equipo de otros colegas. Asumimos que los trabajadores reciban ayuda de otra persona que pueda ser llamada el Buen Samaritano, en dos casos: primero, cuando alguien tiene algo que ganar si él o ella ofrece ayuda (por ejemplo, mayor recompensa común o la perspectiva de recibir ayuda de otros) y en segundo lugar, cuando alguien quiere ayudar sólo porque él o ella puede, esta persona siendo altruista, o el Buen Samaritano. Afirmo que una posible explicación que va más allá de la compensación y la autonomía se refiere a la conducta altruista. Los resultados apoyan la mayoría de las hipótesis confirmando que los gerentes podrían controlar a sus empleados ya sea a través del sistema de compensación o a través de la autonomía para determinarlos ayudar a otros. Las implicaciones prácticas están también identificadas y nuevas direcciones para futuras investigaciones propuestas.

En el tercer ensayo estudio la relación entre la participación en el equipo y las promociones. Dado que en estudios anteriores se ha examinado sobre todo la relación entre la productividad y la promoción, es interesante analizar el complejo conjunto de variables que afectan las perspectivas de carrera más allá de este. Utilizando la teoría de aprendizaje de los empleados y la literatura de desarrollo profesional el objetivo de este

capítulo es investigar tanto los antecedentes como las consecuencias de la afiliación a un equipo. Sostengo que tanto el nivel de la educación y la tenencia se asocian con la participación del equipo, mientras que en el interior del grupo, junto con autonomía individuales y al nivel de equipo, conducen a altas perspectivas de promoción. Los resultados sugieren que los directivos prefieren seleccionar en los equipos a los empleados que tienen una educación alta o tienen una larga historia y experiencia en la organización y una vez dentro del grupo, ser parte de un equipo, tener autonomía individual, educación superior y gozando de autonomía a nivel de equipo -en forma de la libertad la elección del líder del grupo- conducen a altas perspectivas en la carrera, tal como se esperaba. La implicación con respecto a lograr un nivel alto de educación está en consonancia con las conclusiones de Arrow (1972), Spilerman y Lunde (1991) y Chao y Ngai (2001) quienes consideran la educación una importante señal sobre el nivel de competencia de los empleados.

CHAPTER ONE

The Antecedents of Satisfaction with Pay in Teams: Do Performance-based Compensation and Autonomy Keep Team-members Satisfied?

Introduction

The objective of this paper is to investigate the effect of both performance-based compensation and autonomy on satisfaction with pay in the context of team working. Previous literature suggests that even if teams are common in organizations only some firms use corresponding compensation systems (Zobal, 1998; Shaw et al., 2001). Zobal (1998) argues that 65% of the reporting organizations had teams but only half (33%) of them had team compensation systems, while Shaw et al. (2001) reveals that with up to 70% of U.S. organizations are now using some type of team-based rewards.

We expect also that autonomy, as a non-monetary type of reward (Lawler, 1971) and satisfaction will be related in a predicable way. According to Zobal (1998), who considers compensation as a motivator capable to influence behaviour, if an employee is rewarded for certain behaviours or performance, he or she will be keener to repeat the same attitude or action. An employee can be motivated through either monetary or non-monetary forms of compensation. In the first case, employees are acknowledged their performance through an individual performance-pay based contract or by implementing a team-based compensation system that shows how the sum of individual efforts influences the whole performance of the

team. In the second case, autonomy, as an intangible incentive, can keep employees satisfied and later motivated to exert a certain effort required in their job.

My paper considers teams as individuals who work together for the accomplishment of a common goal set by a higher authority in the firm. This goal could be temporary, as in case of project or problem-solving teams or continuous as in the case of production teams. An important contribution for the literature resides in the nature and richness of the data which comes from different industries and countries.

The aim of my paper is to develop a perspective that takes into account agency theory, equity theory and the theory of cooperation when analyzing the effects of performance based compensation and autonomy on satisfaction with pay in teams. Agency theory suggests that once we adopt high performance work practices we have to adapt also the compensation system. As well, it provides predictions on the effects of the rewards. From equity theory it can be inferred that the discrepancy between the deserved or expected salary and the actual amount received could influence satisfaction (Lawler, 1971; Crosby, 1976; Ballas, Dorling & Shaw, 2007) while the theory of cooperation explains the effect of the new practices on employee perceptions of fairness and satisfaction.

Previous research took into consideration the roles of equity and fairness of pay systems (Adams, 1963: Adams & Freeman, 1976; Crosby, 1976; Frohlich, 2007; Goncalo & Kim, 2010) and their influence on satisfaction (Alexander & Ruderman, 1987; Aquino, Griffeth, Allen & Hom, 1997; Masterson et al., 2000; Tremblay, Sire, & Balkin, 2000; Haar & Spell, 2009). However, two aspects from the previous studies require a better understanding of the relationship between team compensation and team-member satisfaction. First, most prior research has studied the relationship between perceived fairness with pay and job satisfaction (Donovan, Drasgow & Munson, 1998; Masterson et al. 2000; Haar & Spell, 2009; Casuneanu, 2010) but little is known about the specific effects of different types of

compensation applied on team member satisfaction. Therefore, in this study I aim to contribute to the compensation and satisfaction literature by looking at how individual performance pay and team-based rewards affect employee satisfaction with pay. The goal of this research is to investigate both similarities and potential dissimilarities between individual performance pay (IPP) and team-based rewards (TBR) in order to study their main effects on satisfaction with pay.

Second, a limitation of the existent research refers to the data which was used. There are few recent studies with non-experimental and comprehensive data. Some articles based their findings on experiments (i.e. Greenberg; 1988; Goncalo & Kim, 2010), other results came from national random samples (Tremblay, Sire & Balkin, 2000 from Canada only; Harr & Spell, 2009 from New Zeeland only; Casuneanu, 2010 from Romania only) or only from a specific industry (i.e. Gomez-Mejia & Belkin, 1989; Kirkman & Shapiro, 2000; Ramaswami & Singh; 2003). Thus, in order to overcome these limitations my paper considers real data from across various industries and countries. The empirical analysis is based on data from the fourth European Working Conditions Survey (EWCS) conducted in 2005 by the European Foundation for the Improvement of Living and Working Conditions. Having data from the EU (EWCS) Survey allows a more comprehensive picture on the European context in general and on the satisfaction of European employees in special. It offers more interesting and complete information than an experimental study would give due to the fact that data comes from real employees in different countries and it encompasses various types of job titles ranging from elementary to managerial occupations.

Previous research explored also the role of autonomy (Lawler, 1971; Greenberg, 2006; Haar & Spell, 2009) when it comes to employee satisfaction or other positive work-related attitudes (i.e. cooperation). Karasek (1979) developed a model of job demands and job decision latitude and observed that stress associated with high job demands decreased

employee satisfaction while simultaneous high job demands and high job decision latitude (autonomy) increased team-member satisfaction. Thus I infer that job satisfaction influenced by job design. Furthermore, Prendergast (2002), Raith (2008) and Ortega (2009) contended that there is a positive correlation between autonomy and performance-based compensation due to the fact that complex jobs require more discretion and compensation based on performance "in order to take advantage of the employee's specific knowledge" (Ortega, 2009). Nevertheless, previous literature was either theoretical (Predergast, 2002; Raith, 2008) or considered autonomy at individual level (Karasek, 1979; Ortega, 2009). There are few studies that take into account the influence of autonomy at team level. In order to fill this gap in the literature I consider in this study the role of both individual or task and team-based autonomy when analyzing their effects on employee satisfaction. Even if autonomy is seen as a non-monetary reward (Lawler, 1971) it may have a latent influence also on satisfaction with pay.

My research contributes to the literature by taking into account not only the type of compensation but also the level of autonomy that a team member enjoys when assessing team member satisfaction with pay as a function of perceived fairness of the rewards (Crosby, 1976). Autonomy is expected to work like a buffer which compensates for potential injustice of the reward systems. Another contribution consists of analyzing simultaneously the roles of individual (task) and team autonomy.

All together, this research aims to contribute to existing literature by examining different types of antecedents of satisfaction with pay in teams. The first type is represented by the form of compensation and is directly connected with the dependent variable, while the second type, autonomy, both individual and team-based, refers to a specific type of reward, a non-monetary compensation which affects satisfaction with pay.

The structure of the paper is presented as follows: in the next section I develop the theoretical framework and formulate the hypotheses of interest, in section three I describe the data, in the next part the results and in the last section I present the conclusions and implications for future research.

Piece rates, equity and agency theory

In this section, the reasoning behind the selection of performance-based compensation as an antecedent of pay satisfaction is described as predicted by both equity and agency theory. To start with, according to equity theory, satisfaction with pay is a subjective function of both actual pay and several individual judgments, and thus individual performance pay has to be applied carefully by properly rewarding each member of the team. For instance, Crosby (1976) considered that employees may feel dissatisfied with their salary when there is a discrepancy between the outcome they want and what they receive, when they compare to somebody else who has more than they do (Kirkman & Shapiro, 2000), when past experience made them expect more than they now have, when future expectancies for achieving better outcomes are low (Cook, Crosby, & Hennigan, 1977), and when they feel they deserve more. Additionally, Lawler (1971) argued that pay satisfaction is a function of the perceived discrepancy between current pay and the amount of pay that should be received. Through this amount he referred to actual pay, wage history, and the perceived pay of referent others.

First, people tend to compare the amount of pay received with the expected pay. If team members feel they were unfairly paid, for instance they were paid less than what they considered based on the effort exerted, they can decide to lower their performance (Leventhal, 1976; Greenberg, 1988; Haar & Spell, 2009; Goncalo & Kim, 2010) or quit their jobs in order to end the inequity (Hom, Griffeth & Selaro, 1984; Konovsky & Cropanzano, 1991; Fields, Pang & Chiu, 2000).

Second, workers may also feel inequity if they receive a lower compensation than their colleagues (Crosby, 1976; Kirkman & Shapiro, 2000). If a team member thinks that he or she exercised a certain level of effort that requires in change a specific amount of compensation he or she will expect it (Mueller, Iverson & Jo, 1999). The same idea that satisfaction with pay can come out from comparing one's compensation to another's is found in Ballas, Dorling and Shaw's research (2007). It was also suggested that distributive justice was obtained when individuals compared their inputs and outputs with those of another colleague and made fairness appraisals (Adams & Freeman, 1976). Likewise, Haar and Spell (2009) argued that equity is obtained when "the input/outcome ratio of the individual is equal to those of others compared with"(p.1829) and thus employees may decide to either lower or increase their amount of effort or change their perceptions about these two variables (Haar & Spell, 2009). Consequently, and in line with previous research, I consider satisfaction with pay to include perceived fairness of the rewards.

To sum up, team member satisfaction with pay depends on how fairly employees consider they have been compensated. Distributive justice, defined as worker's evaluation of the "fairness of his or her rewards given his or her inputs"(Mueller, Iverson & Jo, 1999, p.871) is connected to equity theory (Adams, 1965; Haar & Spell, 2009) and in a compensation setting it refers to the reaction of the individuals to both the amount and the form of compensation received (Tremblay, Sire & Balkin, 2000; Haar & Spell, 2009). According to equity theory, the greater the discrepancy between the amount employees believe they should receive and the actual amount they receive, the greater is their tension or dissatisfaction (Lawler 1990; Livingstone, Roberts, and Chonko 1995).Specifically, the prediction of this theory is that employees prefer

individual performance compensation as long as it is properly applied with respect to their expectations and compared to other team members.

However, if the manager does not observe this effort he would not compensate it accordingly (Holmstrom, 1982). And so, due to moral hazard, employees could feel dissatisfied and perform at a lower level leaving the managers with the free riding problem. In a team setting, the application of individual performance compensation could negatively affect employees who may not perceive their goals as cooperatively linked and may tend to see their jobs and personal tasks as separated from those of their colleagues.

With respect to direct effects on satisfaction, scholars considered that distributive justice, as part of organizational justice, predicts job satisfaction (Greenberg, 1990b; McFarlin & Sweeney, 1992; Martin & Bennett, 1996). Furthermore, literature connected also justice perceptions with respect to pay to job satisfaction (Moorman, 1991; McFarlin & Sweeney, 1992; Aquino, Griffeth, Allen & Hom, 1997; Donovan, Drasgow & Munson, 1998; Masterson et al. 2000; Colquitt et al., 2001; Haar & Spell, 2009). So it is crucial to apply a fair compensation system trying to avoid moral hazard and subjective interpretations in order to keep the workers satisfied with their salary. It is only when individual performance based compensation are applied fairly or perceived to be following distributive justice rules that employees will present a high pay satisfaction.

Another interesting fact revealed by the literature on piece rates is that high-ability workers could form a team norm that must be also achieved by the lowest-ability employees (Hamilton et al., 2003) or the rest of the team members who may feel pressure to reach a certain productivity level in order to receive a satisfactory salary. In keeping with previous research, due to complying with specific productivity levels and

considering no moral hazard problems, I expect individual performance pay to increase employee satisfaction with pay. Consequently, in a team setting, if employees are properly rewarded individually they will feel more satisfied with pay since in a group it is easier to see and compare efforts and outcomes. Therefore, the prediction of agency theory, as well as the expectation of equity theory, suggests that compensation based on individual productivity leads to increased pay satisfaction:

Hypothesis 1: The adoption of individual performance-based compensation leads to higher employee satisfaction with pay in teams.

Team-based rewards and cooperation

Among the many rules that people use to allocate goods and resources (Deutsch, 1985), two have received more emphasis along the time: the equity rule, described in the previous section, in which people are rewarded in direct proportion to their individual contribution (Adams, 1963; 1965), and the equality rule, in which all team members receive the same amount regardless of their individual contribution (Deutsch, 1975). How distributive justice refers to the distribution of socially-valued goods and resources (Foa & Foa, 1974) and to the perceived fairness of the outcomes received (Frohlich, 2007; Goncalo & Kim, 2010) this paper takes it into consideration when analyzing the effect of salary type on satisfaction with pay.

Previous research presents contradictory findings regarding the relationship between team based rewards (TBR) and pay satisfaction: while it was argued that TBR could increase pay satisfaction, it was also believed that they may reduce pay satisfaction. In this section, the reasoning behind each view is described as predicted by the theory of cooperation and equity/equality theory. To begin with, following the assumptions from

theory of cooperation, employees working in a group would generally see their goals as cooperatively linked (Deutsch, 1949; De Dreu, 2007) and so they may prefer a compensation based on team performance knowing that their actions are also for the greater good of the team as a whole. Team-member satisfaction depends on the perception of its members who may consider that being rewarded collectively would ultimately be beneficial for their own interests. Thus, I expect that employees working in a group would generally see their goals as cooperatively linked and be more satisfied when they receive a group-based reward.

From an equity/equality perspective, Folger and Cropanzano (1998) noted that "justice holds people together whereas injustice can pull them apart". Moreover and in line with theory of cooperation, Kirkman and Shapiro (2000) found that employees were more receptive to TBRs when they perceived they were treated fairly. Also perceptions of fairness are likely to promote feelings of job satisfaction because of the attainment of expected rewards (Sridhar N. Ramaswami & Jagdip Singh; 2003). Consequently, an equality rule (i.e. team-based compensation) facilitates team members to perceive their tasks as cooperatively linked and thus increase their motivation to work harder for a higher group reward. These arguments predict a positive relationship between group rewards and pay satisfaction because in a team setting people tend to perceive their goals as related from the beginning (through team cohesiveness). Furthermore, if there is distributive justice and moral hazard is low, team based rewards lead to more pay satisfaction as employees acknowledge that they work together for the accomplishment of a common goal which will later reflect in a common reward.

Empirical evidence regarding the relationship between performance-based compensation and satisfaction found that individual-based rewards contributed to less

pay satisfaction than aggregate compensation (Gomez-Mejia and Balkin, 1989; Lee, 1996; Garza, 1998), thus confirming the theoretical predictions.

However, there is another standpoint in the literature which considers that team pay can lead to perceptions of inequalities about the payment received among the workers, and so it can hamper satisfaction. It was found that organizations that rate as successful did not eliminate individual rewards in favor of team rewards (Zobal, 1999). Nevertheless, previous research presents more and stronger arguments for the positive relationship between group based rewards and pay satisfaction. From the premises of the theory of cooperation and consistent with Kirkman and Shapiro (2000) finding that employees are more receptive to TBRs when they perceive justice and a fit between group based rewards and organizational changes, I expect that in the case of TBR employees would see their goals as cooperatively linked and thus be more satisfied:

Hypothesis 2: The adoption of team-based rewards increases individual satisfaction with pay in teams.

The role of Autonomy

Previous research explored the connection between employee discretion and performance based pay. Prendergast (2002), Raith (2008) and Ortega (2009) found a positive correlation between them due to the fact that complex jobs require more discretion and compensation based on performance "in order to take advantage of the employee's specific knowledge" (Ortega, 2009). Furthermore, Barth, Bratsberg, Haegeland and Raaum (2008) assert that performance-related pay is prevalent in firms where workers have a higher degree of autonomy in how they organize their work. In line with these findings it was also asserted that when managers encourage employees

to trust their own decisions and judgement there would be a certain level of satisfaction regardless of how compensation is distributed (Haar & Spell, 2009). Consequently, autonomy could provide a very good insight in understanding employee satisfaction with pay as a part of overall satisfaction. According to equity theory, employees who were reassigned to higher status offices raised their performance as a response to overpayment inequity and those reassigned to lower status offices decreased their performance as a response to underpayment inequity Greenberg (1988). Moorman (1991) stated that "if employees believe they are treated fairly, they will be more likely to hold positive attitudes about their work and their work outcomes"(p.845). Therefore, it is important to know which variables influence individual satisfaction beyond the distribution system in order to balance its potential negative effects. Previous literature considered the potential mitigating role of non-monetary rewards which could compensate for low distributive justice like job autonomy (Lawler, 1971; Campion & Berger, 1990). It is considered that if employees have more autonomy, they obtain more non-pecuniary rewards, and therefore, controlling for pay level, autonomy should have a positive effect on pay satisfaction. Moreover, Nguyen, Taylor and Bradley (2003) found that perceived job autonomy influences positively satisfaction with pay.

In keeping with previous literature, my research proposes to explore the role of both individual and team autonomy which may directly affect satisfaction with pay. There are several other arguments for using *individual autonomy* as an antecedent for satisfaction with pay. First, autonomy can be regarded as a non-monetary reward (Lawler, 1971) and so can be positively linked to satisfaction as it has similar characteristics with pay. Second, past research considered satisfaction with pay as an important component of job satisfaction (Harr and Speel, 2009) which was found to be increasing with autonomy (Boffey, 1985) or worker's control over how a job is done

(Nguyen, Taylor & Bradley, 2003). Empirical evidence presents mixed results when it comes to the relationship between individual autonomy and job satisfaction. Sprigg, Jackson and Parker (2000) found no main effects for individual autonomy. However, a great amount of literature found individual autonomy positively related to job satisfaction (Hartline and Ferrell, 1996; Hartline et al., 2000; Hui, Au & Fock, 2004; Haar and Spell, 2009). Thus, indirectly, autonomy and pay satisfaction seem to be connected.

Additional support suggesting potential effects of autonomy was found in the model of job demands, job decision latitude and mental strain developed by Karasek (1979). He found that stressful jobs decreased satisfaction of team members unless correlated with high autonomy. Consequently, in the context of high autonomy team members would feel satisfied as managers trust their judgement and their abilities (Haar & Spell, 2009) and perceive autonomy as a specific type of reward (Campion & Berger, 1990) that could compensate for potential low level of distributive justice. On the other hand, in the case of low autonomy, since employees have less control over their work they would be focused more on how rewards are distributed (Haar & Spell, 2009) and thus, the relationship between performance-based compensation and pay satisfaction will be strictly determined by how management is applying compensation. For example, in a team context, using an individual performance pay system considered inappropriate due to moral hazard or personal judgements and without giving enough employee discretion could decrease individual satisfaction with pay.

Thus, taking into account the predictions from previous literature which regard autonomy as a determinant of job satisfaction and pay satisfaction as a component of employee satisfaction, I expect individual autonomy to influence positively satisfaction with pay:

Hypothesis 3: Individual autonomy increases satisfaction with pay in teams

Team autonomy can be considered a determinant of pay satisfaction as well. At team level, individual autonomy is insufficient if it is not complemented with team autonomy. Previous research argued that autonomy has to be "truly collective, distributed throughout the team so that each team-member must have both autonomy to act and the ability to influence others to act" (Spriggs, Jackson & Parker, 2000). Moreover, it was argued that team autonomy parallels individual autonomy (Thomas & Velthouse, 1990; Kirkman & Rosen, 1999).

There is also empirical evidence that group autonomy has a positive effect on job satisfaction in general, and pay satisfaction in particular. Scholars found that group autonomy was positively related to job satisfaction which included satisfaction with pay (Kirkman & Rosen, 1999; Spriggs, Jackson & Parker, 2000). Since team autonomy has been considered the team-level analogy of individual autonomy (Van Mierlo et al., 2006) I hypothesize:

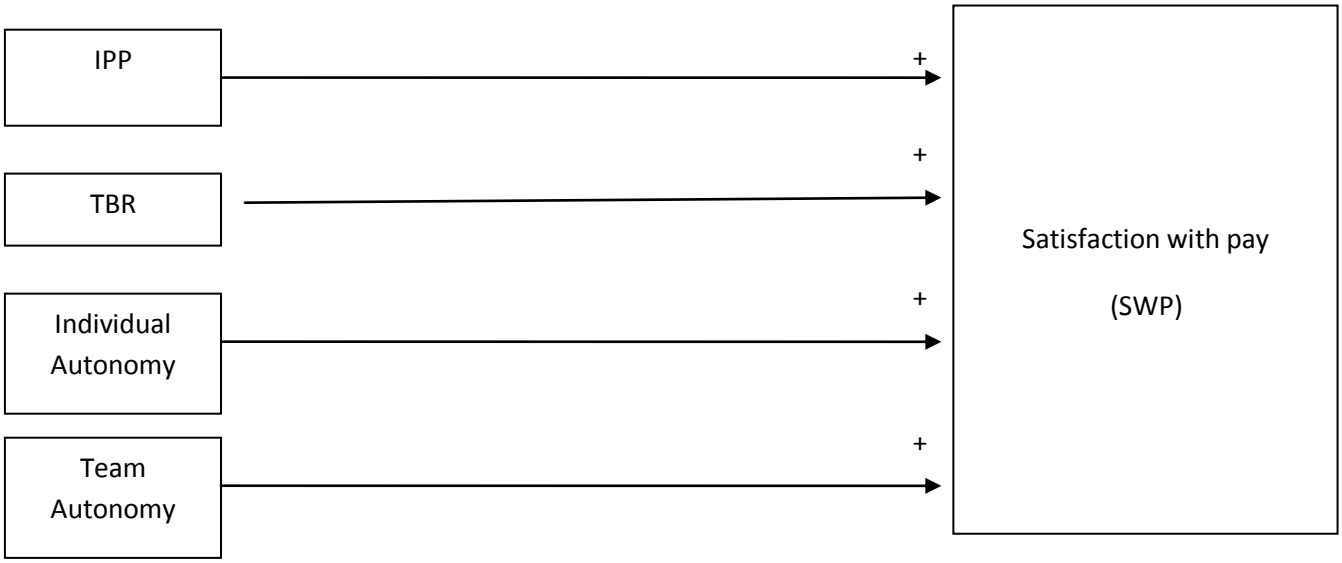
Hypothesis 4: Team-based autonomy increases satisfaction with pay in teams

Model:

Satisfaction with pay in a team can be determined directly by the compensation type and inferred through the degree of autonomy- both individual and team-based- inside a

team. Consequently, as shown in Figure 1, in a team context, I predict that all variables have a positive effect on employee satisfaction with pay.

Figure 1:



Method

The data that I use in this paper comes from the fourth European Working Conditions Survey conducted in 2005 by the European Foundation for the Improvement of Living and Working Conditions. This survey provides an analysis of working conditions in the 27 countries of the European Union, in the two candidate countries (Turkey and Croatia), in Switzerland and Norway.

In total, nearly 30.000 individual workers were interviewed in face-to-face interviews in their own homes between September and November of 2005, but I restricted the sample to employees who report working in a team. The unit of analysis is the individual and the observations are cross-national. The survey sampled the total active population of the respective nationalities of the EU member states, aged 15 years and over, resident in the countries involved in the survey.

Dependent variable

As Crosby (1976) noted that *satisfaction with pay* is a function of both actual pay and several judgments that employees make such as comparisons to others, personal desires and expectations, satisfaction with pay is considered to include perceived fairness of the rewards. Therefore, satisfaction with pay was assessed using a single-item scale based on question q37b from the EWC Survey: "I am well paid for the work I do", coded 1= strongly disagree and 5= strongly agree. Respondents were asked to indicate on a 5-point scale how strongly they agreed or disagreed with the affirmation from above. This measure was assessed based on the scale developed by Warr et al (1979) which includes both intrinsic and extrinsic aspects of job satisfaction, such as pay. Considering pay a dimension of job satisfaction is also in line with Sprigg et al. (2000) and Green and Heywood (2008).

Independent and moderator variables

Individual performance pay was measured through a dummy variable based on question ef6b from EWC Survey: "What does your remuneration include: Piece rate or productivity payments?", coded 0= not mentioned, 1= mentioned.

Team based rewards variable was measured also through a dummy variable based on question ef6h from the same Survey: "What does your remuneration include: Payments based on the overall performance of a group?", coded 0= not mentioned, 1= mentioned.

Individual Autonomy was measured through an index variable which represents the mean of three dummy variables: weather or not the employee can decide on his or her methods

of work, the order of tasks and the speed of work. It uses variable q24a,b,c from the survey.

Team autonomy was measured through a dummy variables based on question q26b_1a from the survey: "Do the members of the team decide by themselves on the division of tasks? " with levels 1 for those who answered "Yes" meaning high team autonomy, and 0 otherwise.

Control variables

Three sets of control variables were used to account for potential individual, organizational level effects and contextual effects. Thus, the variables I use are: age of the respondent (continuous variable), gender of the respondent (dummy variable with value 0 for women and 1 for men), occupation title (categorical variable ranging form 1= elementary occupations to 10= managerial jobs), organizational size (categorical variable with 8 levels according to the number of employees), country (where the survey was conducted) and industry (in which the respondent activates).

Employees' attitude can also depend on the complexity of tasks that they have to develop and on their specific knowledge and abilities. Literature on specific knowledge (Prendergast 2002; Raith, 2008; Ortega, 2009) argues that employees with more complex jobs have more specific knowledge. As it is too costly for the firm to know which actions are optimal, it is preferred to use a performance pay scheme and let the agent decide which action to take. Therefore, in this research I control for occupation level that ranges from elementary occupations to managerial jobs.

In order to test the hypotheses I estimate the following general employee satisfaction with pay (SWP) equation:

SWP = F (IPP, TBR, Individual Autonomy, Team Autonomy, Individual, Organizational, Contextual Characteristics)

Results

I started to analyze the data by observing the descriptive statistics among the main variables of interest: piece rates, team-based rewards, individual and team-level autonomy, age, gender, tenure and satisfaction with pay. Then, I report a table with the correlations among the variables and finally test the hypotheses using OLS regression analyses with two models: first, the basic model considers only the effect of control variables while the second model presents direct effects of the independent variables.

Table 1: Descriptive statistics

Variable	N	Mean	SD	Min	Max
1. Piece rates or productivity payments	13193	0.12	0.33	0	1
2. Team-based rewards	13142	0.06	0.24	0	1
3. Individual autonomy	14752	2.03	1.13	0	3
4. Team autonomy	14590	0.54	0.50	0	1
5. Age	14741	40.33	11.60	15	99
6. Gender	14770	0.51	0.50	0	1
7. Tenure	14602	9.85	9.79	0	60
8. Satisfaction with pay for team members	14682	2.99	1.20	1	5
9. Satisfaction with pay for other workers	9833	2.98	1.19	1	5
10. Satisfaction with pay for all employees	24813	2.98	1.20	1	5

Table 1 presents the descriptive statistics of the main variables of my research. Piece rates (PR), team-based rewards (TBR), individual autonomy and team autonomy are the independent variables that influence employee satisfaction with pay in teams, while age, gender and tenure are control variables describing the individuals. What is interesting to observe is that respondents are generally satisfied with their pay (2.98) and PR and TBR are not very common as their means are around 0. Also, I see that the average individual autonomy is 1.13 representing about one third of the total potential. Team autonomy is more balanced as its mean is 0.54 and tenure in a company is around 10 years (9.85).

Table 2 presents the correlations between the main variables of my research. I notice a negative and significant correlation between PR and individual autonomy (-0.07), between PR and autonomy at team level (-0.05), between PR and age (-0.04), between PR and tenure (-0.04). There is also a negative correlation between team autonomy and gender (-0.07). Positive and significant correlations are found between PR and gender (0.08), between TBR and gender (0.05), between individual autonomy and age (0.03), between individual autonomy and tenure (0.04) and between team autonomy and satisfaction with pay (0.08). The highest correlations are between individual and team autonomy (0.21) and between age and tenure (0.57).

Table 2: Correlations among the main variables

Variable	1.	2.	3.	4.	5.	6.	7.
1. Piece rates or productivity payments							
2. Team-based rewards	0.11						
3. Individual autonomy	-0.07•	0.03					
4. Team autonomy	-0.05•	-0.01	0.21•				
5. Age	-0.04•	-0.01	0.03•	0.01			
6. Gender	0.08•	0.05•	0.01	-0.07•	-0.01		
7. Tenure	-0.04•	0.02	0.04•	-0.01	0.57•	0.03	

8. Satisfaction with pay	-0.01	0.03	0.12•	0.08•	-0.01	0.11•	0.01

Significant correlations using Spearman test are market with • and correspond to p<.01

Table 3: Regression analysis for performance-based compensation and autonomy predicting satisfaction with pay in teams

Variables		Direct Effects
Piece rates or productivity payments		.1030••
Team-based rewards		.0102
Individual autonomy		.0451•••
Team Autonomy		.1400•••
Individual	Age	-.0031••
	Gender	.0208
	Tenure	-.0007
	Job title dummies	Yes
	Salary dummies	Yes
Organizational	Size dummies	Yes
Contextual	Industry dummies	Yes
	Country dummies	Yes
Number of observations		6315
R^2		0.1893
Adjusted R^2		0.1799
Root MSE		1.0901

Notes: The Satisfaction equation is estimated by OLS

• p<.1

¨ p<.05

¨¨ p<.01

Table 3 presents the results of steps that I followed for testing the hypotheses. The satisfaction equation is estimated using Ordinary Least Squares[2]. In Step 1 I consider only the effects of the control variables on satisfaction with pay in teams, while Step 2 adds the effects of the independent variables: PR, TBR, individual and team-based autonomy.

The first conclusion is that PR influence positively satisfaction with pay, its coefficient being -.103 (p<.05). This finding supports the first hypothesis, confirming that the adoption of piece rates or other productivity payments leads to higher employee satisfaction with pay in teams. However, I found little support for the second hypothesis as TBR were not found significant. Contrary to the expectations, this result does not support Hypothesis 2.

Remember that Hypotheses 3 asserts that individual autonomy affects positively the team-member satisfaction. Results from Table 3 confirm this hypothesis as the coefficient of individual autonomy is positive and significant: .0451 (p<.01).

As for the autonomy at team level I notice that its effect is also positive and significant .14 (p<.01) supporting Hypothesis 4.

Consequently, piece rates (or other productivity payments), both individual and team-based autonomy are essential in order to keep team-members satisfied with their pay. While compensation type is a more evident determinant of satisfaction it is interesting to observe how autonomy still has an important effect even after I controlled for salary dummies for each category. As expected salary categories are significant but not sufficient:

[2] This satisfaction equation is estimated using Ordinary Least Squares but the same results in terms of significance were obtained through estimating a similar equation with Ordered Logit.

Table 4: Salary categories and significance

Salary category	Coefficient	P-value
Salary 2	-.0867	0.218
Salary 3	-.0144	0.832
Salary 4	.1754***	0.008
Salary 5	.1675***	0.009
Salary 6	.3323***	0.000
Salary 7	.4046***	0.000
Salary 8	.5019***	0.000
Salary 9	.7154***	0.000
Salary 10	.9649***	0.000

Table 4 presents the significance of each salary category compared to the lowest salary level, salary 1. In the regression I find that all salary dummies from salary 4 to salary 10, representing medium-high salary bands, have a positive and significant effect on satisfaction with pay. Thus, I observe that compensation magnitude is an important tool when it comes to employee satisfaction but it has to be applied carefully and along with the proper compensation type and amount of autonomy. This happens because the form or type of compensation, especially piece rates or other productivity payments are closer to the employee perception of fair pay as it is easier to measure one´ s work. Therefore, if employees may feel less satisfied with their salary band they could come to a better

understanding of the situation by considering their direct and quantifiable effort. Moreover, when managers offer employees discretion, they may regard it as a non-monetary type of rewards and consequently one can balance a low-medium salary level with freedom of choice regarding methods of work, division of tasks or spare time.

In order to check if our results are robust to a more general structure of errors, I ran tests with robust standard errors clustering after countries. I expect that people from the same country to be correlated and results show that in this case both types of autonomy, individual and team-based are significant and positive ($p<.01$).

Discussion and Conclusions

The purpose of this study is to analyze the antecedents of satisfaction with pay in teams by focusing on performance pay and autonomy. In order to study the hypotheses of interest I considered both piece rates/productivity payments and team-based rewards and also two types of autonomy: individual and team-based. Data comes from the forth EWCS and I employed Ordinary Least Squares analysis.

Several important findings emerge from this study. First, my results show that piece rates or other productivity payments are associated with higher pay satisfaction, offering support to Hypothesis 1, while team-based rewards do not influence satisfaction with pay, meaning that hypothesis 2 was not supported. These findings are in line with previous research which considered that employees who experience distributive fairness are likely to indicate greater satisfaction (Moorman 1991; Netemeyer et al. 1997). Haar and Spell (2009) contended that "understanding the links between organizational justice and the distribution of employee reward system is vital for motivating employees" (p.1830).

Second, with respect to autonomy the results show that both individual and team-based discretion are positively associated with pay satisfaction, as predicted by hypotheses 3 and 4. The coefficient of team autonomy (0.14) is the highest coefficient of all the significant variables suggesting that team autonomy is an important tool for keeping employees satisfied. It looks like irrespective of the amount or type of compensation employees with high autonomy (individual or group-based) consider themselves more satisfied or "fairly" paid for what they do. Thus, if the rewards system lacks justice due to moral hazard (Holmstrom, 1982) or other subjective factors at least autonomy can compensate for it and keep team-members satisfied with what they receive according to the job done. We have to remember the specificity of this study which uses as dependent variable the answer to the question "I am well paid for what I do". This comprises two parts: the direct or evident which refers to the fairness of the rewards and the less obvious one which considers other non-monetary benefits.

Implications, limitations and future research

This study presents some limitations that have to be looked at carefully. First, this research is a cross-sectional analysis; there is only one period of time, between September and November of 2005. It would be interesting to study if the findings change when we conduct a time series analysis.

The second limitation of this study is due to data availability: the survey does not offer precise information about piece rates or productivity payments so one can infer that are either individual or group-based. However, the survey has another specific question, ef6h, which refers only to compensation based on group performance so one can assume that the question about piece rates and other productivity payments (ef6b) refers to individual based rewards.

But this is not clearly stated in the survey. For future research it would be interesting to see the exact percent that corresponds to group compensation and to compare it with the percent for individual performance pay.

Finally, the contribution of this study demonstrates that both individual and team-based autonomy influence positively pay satisfaction and perceived fairness in teams. Moreover, it looks like team autonomy has a bigger effect on our research variable, with a coefficient of 0.140 compared to 0.045 of individual or task autonomy.

Taken together, my results imply that both productivity based rewards and autonomy are important tools when it comes to determining employee satisfaction. Managers should know when to introduce rewards based only on individual merits so as to keep their workers motivated and when to give employees autonomy in order to compensate for potential fairness shortcomings in the payment system.

CHAPTER TWO

The Determinants of Helping Behavior in Teams

Introduction

The goal of this paper is to analyze the antecedents of helping behaviour in teams by looking at performance based compensation and autonomy. We build upon previous organizational citizenship behaviour (OCB) literature by focusing on a specific area, helping behaviour received in teams. This paper considers teams as groups of people who work together for the accomplishment of a common goal set by a higher authority in the firm. This goal could be temporary, as in case of project or problem-solving teams or continuous as in the case of production teams. It is important to relate helping behavior and compensation in order to study which payment schemes are prone to induce more or less help in a team context. Also, autonomy is connected to the amount of assistance received as it enables workers to move across and answer requests of help from their colleagues. Managers should know when to apply a specific form of compensation and when to use a specific job design with the purpose of creating a good and efficient working environment in which employees receive help when they ask for it.

Human resources management is one of the critical areas in which changes and adoption of new rules and procedures have been evident in the last decades. Most of these practices refer to the adoption of alternative forms of team-based organization together with learning, decentralization of decision making rights and incentives, all in order to enhance employee's involvement and knowledge sharing. Moreover, compensation is also of growing importance because firms need to both adjust their payment schemes according to their organizational design and understand as well that compensation influences behavior and can

consequently be used as a motivator. If an employee is rewarded for certain behaviours or performance, he or she will be keener to repeat the same attitude or action (Zobal, 1998). So, we motivate an employee by showing that his performance is taken into account through an individual performance-pay type of contract or by implementing a team-based pay that shows how the individual effort influences the whole performance of the team.

Another aspect concerning teams refers to their general purpose. Thus, it is considered that teams are implemented so that their members can combine and apply their differences in skills and abilities through helping each other, and providing each other with advice (Tjosvold and Yu, 2004; Oosterhof, Van der Vegt, Van de Vliert and Sanders, 2009). For that reason helping behavior is important not only for employees, as it provides and maintains a good and friendly environment, but also for the organization, as it increases productivity. For instance, Hamilton, Nickerson and Owan (2003) found that heterogeneous teams formed by both high and low-ability workers were more efficient than homogeneous teams in terms of ability. In this study I assume that workers receive help from somebody else who may be called the good Samaritan in two cases: first, when somebody else has something to gain if he or she offers help (for instance higher common reward or the perspective of receiving help himself) and second, when somebody else wants to help only because he or she can-has the necessary autonomy to do it, this person being the good Samaritan[3].

In this way, my paper contributes to the literature by considering the concept of Good Samaritan behavior as a potential explanation for OCB irrespective of the compensation system (Tang et al., 2008) and by introducing the role of autonomy at both individual and team level.

[3] The concept of the "Good Samaritan" comes from the Biblical parable with the same name and refers to those who come to the aid of others for no other reason than kindness, therefore acting without any expectation of reward (Brouhard, 2007). The Good Samaritan's helping motives are purely intrinsic and altruistic in nature and lead to genuine helping behavior (Tang, Sutarso, Wu Davis, Dolinski, Ibrahim and Wagner, 2008)

The goal of my study is to develop a perspective that takes into account these assumptions when analyzing the effect of performance pay compensation and autonomy on helping behaviour in teams. If previous research on OCB focused on the relationship between satisfaction and cooperation (Organ, 1990; Organ & Ryan, 1995), I want to explore which factors of those that lead to satisfaction and analyzed in the first essay lead also to increased helping behavior. Theories relevant to my research question are agency theory from economics, and both social exchange theory and the theory of cooperation from psychology. First, agency theory suggests that once we adopt high performance work practices[4] we have to adapt also the compensation system. Moreover, it provides predictions on the effects of the rewards. The connection between employee autonomy and performance pay was explored by Prendergast (2002), Raith (2008) and Ortega (2009) who found a positive correlation between them as complex jobs require more discretion and compensation based on performance "in order to take advantage of the employee's specific knowledge" (Ortega, 2009). Following agency theory premises, it is expected to introduce also autonomy as a determinant of helping behavior as it is highly correlated with the compensation system and also considered a type of non-monetary reward (Lawler, 1971; Campion & Berger, 1990). Second, I draw from social-exchange theory in order to investigate why team-members help their colleagues. Based on the norm of reciprocity (Gouldner, 1960), a significant source of helping behavior refers to how much organizational citizenship behavior an employee has previously received from coworkers (Deckop, Cirka & Andersson, 2003). Third, the theory of cooperation explains the effect of the new practices on employee behavior which may explain the determinants of assistance received through pure altruistic behaviors as team-members perceive easier their goals as connected and the similarities among themselves.

[4] High performance work systems are a systemic approach to organizational design that seeks to align the organization and its environment, the organizational structure, systems, and processes using team structures in order to achieve operational effectiveness, innovation, and high quality results for customers (Sienknecht and Aken, 1999).

Therefore, the motivation of this paper is to investigate how performance based compensation and autonomy shape helping behaviour among team-members and to analyze how much help comes from "the love of money" (Tang, Sutarso, Wu Davis, Dolinski, Ibrahim & Wagner, 2008) and how much from good Samaritan attitudes.

Unfortunately, research examining the relationship between piece rates and helping behaviour has offered contradictory responses. While it has been argued that team-based performance pay increase cooperative behaviour (Miller and Hamblin; 1963, Rosenbaum et al., 1980; Shea and Guzzo, 1989; Encinosa, Gaynor and Rebitzer, 2007; Bamberger and Levi, 2009), it has also been found that task and not reward interdependence drives helping behaviour (Wageman and Baker, 1999). Therefore, in order to come to terms with the conflicting results from the literature, in this article I argue that two aspects of the previous studies require a better understanding of the relationship between team compensation and team-member behaviour. First, as noted before, most prior research has studied the relationship between the compensation system and cooperation in groups but very little is known about the role played by autonomy in this context. Consequently, in this study I aim to contribute to the compensation and behavioural literature by looking at how both individual and team-level autonomy affect the amount of assistance received in teams. Second, a limitation of the existent research refers to the data which was used. There are very few studies with non-experimental data. Many articles based their findings on experiments or quasi-experimental field studies (Wageman, 1995; Wageman and Baker, 1999; Bamberger and Levi, 2009). Other results came from national random samples that were not recent enough and described only a particular field (e.g. Encinosa, Gaynor and Rebitzer, 2007 who used a 1978 survey from the medical field). Thus, in order to overcome these limitations my paper considers real and recent data from across various industries and countries. The empirical analysis is based on data from the fourth European Working Conditions Survey

conducted in 2005 by the European Foundation for the Improvement of Living and Working Conditions. Third, a direction of future research in Chen and Chiu (2009) paper refers to exploring simultaneously the direct and indirect effects of autonomy on OCB. Consequently, the goal of my research is to analyze in the same paper the influence of autonomy on help received in teams both as independent and moderator variable.

The structure of the paper is presented as follows: in the next section I develop the theoretical framework and formulate the hypotheses of interest, in section three I describe the data, then I present the results and in the last section I discuss the conclusions and implications for future research.

Previous Literature concerning Helping Behavior in Teams

The evidence comes mainly from agency theory, social-exchange theory and the theory of cooperation. Agency theory suggests that once high performance work practices are adopted there is a necessity to adapt also the compensation system, while the theory of cooperation explains the effect of the new practices on employee behavior.

The Influence of Agency Theory

When I analyze the agency theory perspective I focus on performance pay compensation and its influence on helping behavior in teams. In this context I draw from agency theory the idea that individuals respond to financial incentives and will therefore help one another if this leads to an increase in pay or if offering help does not have a detrimental effect on their own work pace and time allocated for finishing their own jobs. Then, it is interesting to analyze which compensation scheme is best in order to induce helping behavior. In a team context, receiving piece rates or other productivity payments may diminish the probability of giving assistance to other colleagues due to the fact that employees are paid according to their

individual work, which in this case is easily measurable. Consequently, each minute that an employee spends helping another may have an opportunity cost.

Empirical Evidence

Financial incentives are considered to be the most powerful of all compensation types in aligning organizational objectives and employee behavior. When we apply performance pay rewards we have to do it very carefully by rewarding properly each member of the team. If any member feels that he or she was paid less than what he or she considered according to the effort supplied, we face the problem of observation and the employee can decide to lower his or her performance. Employees may feel injustice if they receive a lower compensation than their colleagues (Kirkman and Shapiro, 2000). If the worker from a team thinks that he or she exercised a certain level of effort that requires in exchange a certain amount of compensation he or she will expect it. But, if the manager does not observe this effort he will not compensate it accordingly. And here appears the observation problem which can determine the employee to withdraw from the team or to perform at a lower level (free riding problem). Moreover, an employee can decide not to respond to a request of assistance received from another colleague if he or she feels that the compensation received did not match his or her effort.

With respect to the relationship between the compensation received and cooperation, it was argued that worker decisions to help one another are influenced negatively by promotion-based incentives (Drago and Garvey, 1998). On the other hand, previous literature has found that group rewards lead to increased cooperative behavior (Miller and Hamblin, 1963; Shea and Guzzo, 1989; Bamberger and Levi, 2009) and that performance-based compensation (at both individual and group level) influences positively employees´ perceived rewards for sharing knowledge (Siemsen, Balasubramanian & Roth, 2007). The

relationship between incentive pay and intra-group consultations is also consistent with mutual help activities (Encinosa, Gaynor and Rebitzer, 2007). The authors found that "high-powered individual incentives will cause individuals to shirk on help to others" as "in a group of four physicians, increasing incentives from equal sharing (team-based rewards) to full incentive pay reduces the frequency of intra-group consultations by 0.19 per day" (Encinosa, Gaynor & Rebitzer, 2007).

Additionally, in order to be able to move and answer to assistance requests employees need autonomy. Workers need flexibility to move and help their team-mates. If they do not answer to their colleagues' requests for help that does not mean that they are not eager to assist, it may be due to the job title specificity which does not allow to leave the job or to interrupt what one doing at a specific moment. On the other hand, an employee who enjoys autonomy can decide by himself or herself what do to in his or her own time. Moreover, discretion is beneficial as employees can make use of their specific knowledge (Ortega, 2009).

The Psychological Perspective

Once team-working and innovative compensation schemes have been introduced within companies we need to explore their effect on employee behaviour. The psychological perspective comprises both social-exchange theory with roots in economics, psychology and sociology and the theory of cooperation.

Social-Exchange theory

In order to be able to help one another, employees have to be endowed with autonomy or to receive some kind of reward based on group performance. This paper considers autonomy at both individual and team-level. Even if most prior research following Karasek (1979) has

conceptualized autonomy at individual level of analysis it is also advisable to look at multiple levels (e.g. Seibert, Silver and Randolph, 2004) as they can offer a more accurate perspective on the role of empowerment. Furthermore, previous research argued that autonomy will be insufficient "unless it is truly collective, distributed throughout the team so that each team-member must have both autonomy to act and the ability to influence others to act" (Spriggs, Jackson & Parker, 2000). However, sometimes team-autonomy may inhibit individual autonomy as decisions are shared rather than taken alone and responsibility is diffused instead of granted to one person (Uhl-Bien & Graen, 1998; Kirkman & Rosen, 1999) so it is advisable to consider the potential moderating role of this construct. According to social-exchange theory co-worker support can be explained through the concept of "team-member exchange" (TMX, Seers et al., 1995; Cole et al. 2002; Van Mierlo et al., 2006) which captures the willingness of an employee to help the team or other team-members to accomplish their goals. According to Van Mierlo et al. (2006), an employee may thus reciprocate supportive actions from colleagues by engaging in extra role behaviours. Reciprocation has been found in disciplines ranging from economics (Rappaport and Chammah, 1965) to evolutionary biology (Axelrod, 1984) as an optimal strategy for long-term self-benefit (Deckop, Cirka & Andersson, 2003). Thus, building on Gouldner`s (1960) norm of reciprocity it is likely that an employee who previously received help from another to be keen to return the favour. Deckop, Cirka and Andersson (2003) actually found that employees help their colleagues because they received help from others.

To sum up, in the case of a compensation based on piece rates or other productivity payments agency theory predicts that employees prefer to focus on their own work rather than offering their help in order to obtain a higher individual reward. By combining it with social-exchange theory it is expected that employees with individual piece rates would receive less assistance through reciprocation: team-members would prefer not to help them as

they would expect less or no assistance from their part. As for autonomy, I expect team-members with high individual and/or group discretion to receive more help especially from the colleagues who they assisted before.

The Theory of Cooperation

The creative process specific of a team will be fruitful only if we pay attention to the attitude of workers and the relationships among them (Ditkoff et al, 2005). Creativity and cooperation can be also stimulated by creating the right match of task and goal interdependence and hence decreasing the possible negative effects of information asymmetry (Van der Vegt et al., 2003).

The issue of team working, and team member behaviour in particular, has been addressed by the theory of cooperation and competition (Deutsch, 1949; De Dreu, 2007). In order to understand the psychological processes underlying team effectiveness this theory argues that people in groups generally perceive their goals and those of others to be cooperatively linked ("swim or sink together"). Thus, cooperative outcome interdependence is an important dimension of workgroups. DeDreu (2007) observed that the more team members perceive it the more they share information, the better they learn and higher the efficiency of the group. Using the theory of cooperation I expect that employees working in a group would generally see their goals as cooperatively linked and thus be keener to assist their colleagues especially when they receive a group-based reward (Bamberger and Levi, 2009). Consequently, a better understanding of the common goal of the company and of the team leads to proper efforts exercised by the employees and consequently to a higher cooperation among the members of the group. In this respect, helping behaviour depends on the perception of its members who may consider cooperation beneficial for their own interests. If the employees understand that, they will be eager and open to offer support to their colleagues.

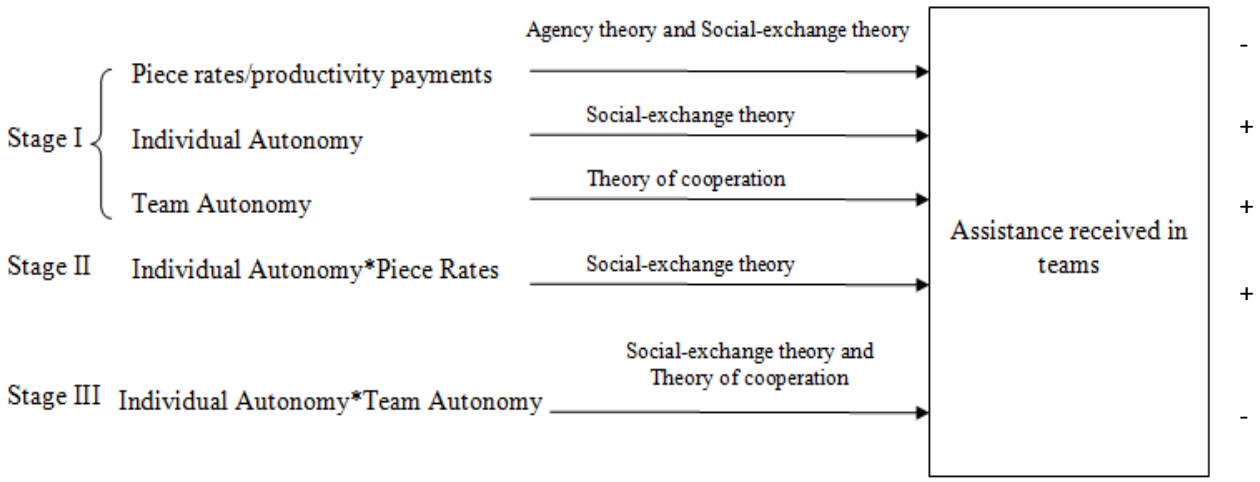
Other elements affecting OCB refer to job characteristics (Van Dyne, Graham and Dienesch ,1994) like autonomy as determinants of helping behaviour. Anderson and Williams (1996) found that task autonomy increased the incidence of employees' seeking help from others and that this behaviour fostered the employees' efforts to help others. Likewise, previous literature has argued that autonomy can increase employees' perceived organizational support (Eisenberger, Cummings, Armeli, & Lynch, 1997; Eisenberger, Rhoades, & Cameron, 1999), an antecedent of OCB (Rhoades & Eisenberger, 2002). This phenomenon can be explained either through reciprocation, as argued in the previous section, employees preferring to assist the colleagues who helped them before or through genuine altruistic behavior like offering help to someone just because he or she is in need. Besides, in teams it is easier to notice the similarities among workers and to perceive somebody else's goal as your own. On the other hand, when an employee with high individual and group autonomy receives more help we expect him or her to have a higher status in the group. If this person receives more help a "boss"-effect is present which annihilates the possibility of a good Samaritan behavior. Nevertheless, if workers with simultaneously high levels of individual and group discretion receive the same or less amount of help we witness a pure altruistic behavior induced by the premises of the theory of cooperation, kindness and no expectation of any type of compensation, material or intangible (i.e. assistance received in the future).

Hypotheses Development

The literature review suggests that helping behaviour in a team can be influenced by the compensation system and by job design particularly, through autonomy. If genuine altruistic behaviors are present they cannot be directly controlled by the management as they are intrinsic and subjective characteristics of the employees. The only mechanisms through

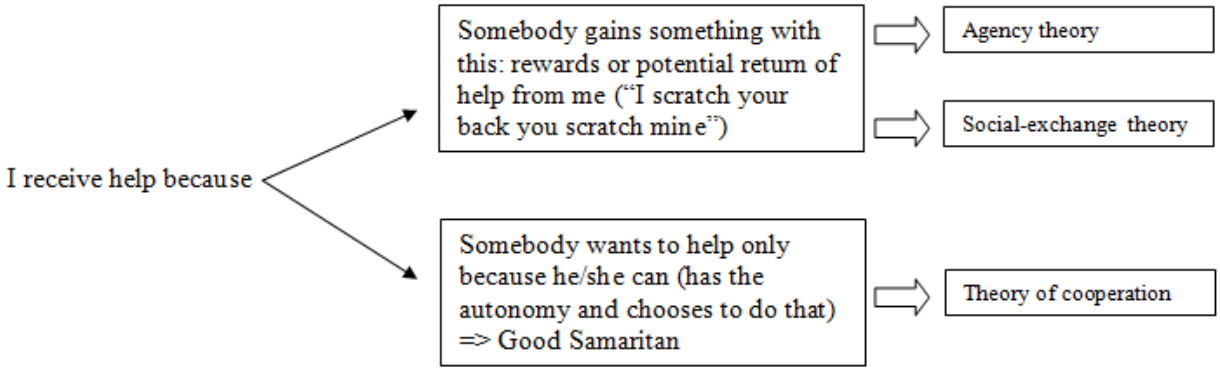
which managers can objectively induce helping behavior are either the payment system applied or the amount of empowerment given at both individual and group level. The model explaining helping behavior developed in this paper captures the effects of these two variables by analyzing their influence alone or through interactions between them. Agency theory and social-exchange theory focus more on the "love of money" and reciprocity type of drivers, while the theory of cooperation brings a more altruistic explanation that goes beyond compensation and autonomy.

Figure 1: A Model explaining Helping Behaviour in Teams



As noted before in this study, I assume that workers receive help either when somebody else has something to gain if he or she offers help (extrinsic motivation) or when somebody else wants to help only because he or she can -has the necessary autonomy to do it (intrinsic motivation). Building upon Tang et al. (2008) model which considers Good Samaritan behavior as intrinsic motivation versus love of money as extrinsic I assume that there is also another antecedent, the enabler, worker autonomy. These assumptions are summarized in the following figure:

Figure 2: The assumption of receiving assistance in teams



The first part of figure suggests that when employees have autonomy they help their teammates only if they have something to gain from this action in terms of monetary rewards or future reciprocal help. The second part of the figure shows that autonomy gives the ability, so it is a necessary condition but not sufficient: the help can come also from genuine concern for people, team or the organization. Consequently, potential Good Samaritan behavior, as a hidden driver, can be estimated through different variables in order to catch its effect on the amount of assistance received in teams.

Stage I: Independent variables

From agency theory I infer that compensation based mainly or entirely on individual performance pay negatively affects cooperation inside the team as the worker would prefer to concentrate on his own work and performance rather than to assist his colleague. Building on agency theory concepts, individual piece rates or productivity payments make the employee less prone to offer his help. Adding now social-exchange theory premises, through the norm of reciprocity, I expect an employee who receives piece rates to enjoy less assistance from his colleagues as he did not offer help to other team-members. Consequently, as shown in Figure 1, I expect piece rates/productivity payments to have a negative effect on assistance received in teams.

On the other hand, based on the theory of cooperation I expect that employees working in a group would generally see their goals as cooperatively linked. Nevertheless, they may prefer to assist their team-mates less when they receive an individual performance payment than when they enjoy a compensation based on team performance (Bamberger and Levi, 2009) as the latter means a higher reward for the whole group so helping a colleague would indirectly be beneficial for them as well. In the case of individual piece rates employees focus more on their own work and tend to see their goals and the ones of the other team-members less connected. Therefore, the potentially negative influence from the agency theory is considered to be higher than the potentially positive one derived from the theory of cooperation. So, through reciprocation, the introduction of piece rates is expected to decrease assistance received inside the team:

Hypothesis 1: Piece rates or productivity payments have a negative influence on the amount of assistance received in teams

Individual and team-based autonomy

The connection between employee discretion (autonomy) and performance pay was explored by Prendergast (2002), Raith (2008) and Ortega (2009) who found a positive correlation between them due to the fact that complex jobs require more discretion and compensation based on performance "in order to take advantage of the employee's specific knowledge" (Ortega, 2009). Following agency theory premises, it is expected to introduce also autonomy as a determinant of helping behavior as it is highly correlated with the compensation system and also considered a type of non-monetary reward (Lawler, 1971; Campion & Berger, 1990).

As noted before, employees need flexibility in order to be able to assist one another. Consequently, team-members with high autonomy are likely to offer their assistance and

applying the norm of reciprocity to their case, also to receive more help. By introducing autonomy into the analysis I gain a thorough perspective on the organization of work inside the team, and so I am able to consider the availability of the employees to help others as a variable that depends on the job design. This paper considers autonomy at both individual and group level. Team-autonomy is introduced in the analysis because of two reasons. First, at team level, individual autonomy is insufficient if it is not complemented with team autonomy (Spriggs, Jackson & Parker, 2000). Second, I assume that team-autonomy has a positive effect on employee helping behaviour as it leads team-members to share assistance due to the premises of theory of cooperation. The theory of cooperation emphasizes that employees working in a team tend to see their goals related. Moreover, DeDreu (2007) observed that the more team members perceive this the more they share information and consequently I expect them to offer more assistance to their colleagues. Consequently, I elaborate the second hypotheses of my study:

Hypothesis 2: Individual autonomy has a positive influence on the amount of assistance received in teams

Hypothesis 3: Team autonomy has a positive influence on the amount of assistance received in teams

Stage II: Combined effects of piece rates and individual autonomy

This paper considers autonomy as the enabler of giving help, so I expect its influence to be higher and more significant than the effect of the reward system. Moreover, it is interesting to study what happens if the compensation system is based on piece rates or other productivity payments and there is simultaneously high individual autonomy. As previously stated in the first hypotheses, the compensation has a negative effect and autonomy a positive influence on assistance received in teams. Nevertheless, previous literature on autonomy

found its influence on OCB highly significant either directly (Van Dyne, Graham and Dienesch, 1994; Anderson & Williams, 1996) or through mediators (Piccolo & Colquitt, 2006; Chen & Chiu, 2009), while research regarding compensation based on productivity provided divided results: if group rewards increase cooperation behaviour (Miller & Hamblin, 1963; Bamberger & Levi, 2009) it was found that individual incentives decrease the amount of help offered to others (Encinosa, Gaynor & Rebitzer, 2007). Surprisingly, Wageman and Baker (1999) found that task and not reward interdependence drives helping behaviour. Thus, seeing that previous literature has divided results, my research proposes to analyze the determinants of helping behavior by combining a specific type of compensation with individual autonomy. Furthermore, by applying the norm of reciprocity, I predict that the combined effect of piece rates and individual discretion increases the amount of assistance received in teams:

Hypothesis 4: The interaction between piece rates and individual autonomy has a positive influence on the amount of assistance received in teams

Stage III: Combined effects of individual and team-based autonomy

As argued in the theoretical framework, the justification for using autonomy as a moderator variable comes from the fact that employees need autonomy in order to be flexible and answer to assistance requests from other team-members. Nevertheless, high levels of team-autonomy may decrease individual autonomy as in this case decisions are shared rather than taken alone and responsibility is diffused instead of granted to one person (Uhl-Bien & Graen, 1998; Kirkman & Rosen, 1999). Moreover, I expect from social-exchange theory that an employee who enjoys both individual and team-based autonomy will receive more help due to the norms of reciprocity. Nonetheless, if I base my assumption on the theory of cooperation and the good Samaritan attitude I predict that

employee with simultaneously high levels of individual and team autonomy will receive less assistance as team-members offer their help from altruism not expecting hidden material or intangible rewards. Also, the case of both types of autonomy high could reflect the case of a higher status member in the team so if we receive less help in this context we assure that high position bias is accounted for. Therefore, I predict that the combined influence of individual and team-autonomy leads to less help offered in teams. Having too much responsibility may diminish the willingness to offer support. Thus, using social-exchange theory I expect also the level of assistance received to decrease and consequently team-autonomy to work as a moderator of the relationship between individual autonomy and help received. Additionally, employees with simultaneously high levels of individual and team discretion may be perceived as higher-status members and others may feel obliged to help. Nevertheless, under the premises of theory of cooperation, I expect team-members to assist each other out of pure altruism so irrespective of the status and obligation:

Hypothesis 5: Team-based autonomy moderates the relationship between individual autonomy and the amount of assistance received in teams. I expect the sense of the interaction to be negative.

Data and Methods

The data that I use in this paper comes also from the fourth European Working Conditions Survey conducted in 2005 by the European Foundation for the Improvement of Living and Working Conditions. This survey provides an analysis of working conditions in the 27 countries of the European Union, in the two candidate countries (Turkey and Croatia), in Switzerland and Norway. In total, nearly 30.000 individual workers were interviewed in face-to-face interviews in their own homes between September and November of 2005, but I

kept the observations referring to employees working in a team. The unit of analysis is the individual and the observations are cross-national. The survey sampled the total active population of the respective nationalities of the EU member states, aged 15 years and over, resident in the countries involved in the survey. All the data that I use is from this survey and it refers to employees who are already working in a team.

Dependent variable: the dependent variable is assistance received in teams measured as the assistance received by team-members from their colleagues if they ask for it. The question from the survey used to measure this variable is q25a: "You can get assistance from colleagues if you ask for it." Responses were collected using a 5-point Likert-like scale (from 1= "strongly disagree" to 5= "strongly agree"), 1 meaning that the respondent almost never receives assistance, 2 that he rarely receives it, 3 that sometimes he is assisted, 4 that he often gets supported and 5 that he almost always receives assistance. I consider the distance among the intervals equally important. The survey has other two questions that refer to assistance, q25b and q25c which consider help received from superior and external help. Thus, in a group setting it can be inferred that colleagues who offer their assistance are fellow team-members.

Independent variables: the explicative variables that I use in this study in order to contrast the hypotheses are piece rates or other productivity payments[5] (PR), individual autonomy (index) and team autonomy. PR and team autonomy are dummy variables with levels 1 for applying PR and 0, otherwise and 1 for high team autonomy, 0 otherwise. Team autonomy is measured through the variable q26b_1a from the survey: "Do the members of the team decide by themselves on the division of tasks?" It is also assumed that if a team-member enjoys team-autonomy, other team-member will enjoy it as well due to the definition

[5] The Assistance variable refers to the help received by the respondent, whereas PR refer to the type of compensation received by the respondent. I would like to be able to use both sets of variables to refer to the same person (i.e.: help given by the respondent and pay received by the respondent). Since, due to data availability, I do not have this information I have to work with assistance and pay received by the respondent.

of team-autonomy which answers to the following question from above. For instance, if a team-member who has team autonomy receives help, this must have been given by another group member who also enjoys team autonomy.

Moderator variable: team autonomy in hypothesis 5.

Employee behaviour refers also to perceived similarity to other team members and this was proved essential for individuals (Van Knippenberg, De Dreu, & Homan, 2004). From here it may be inferred that employees prefer to assist other colleagues with similar attributes. Therefore, the need to control for certain variables:

Controls: are classified into individual, organizational and contextual. The individual group refers to the factors that are idiosyncratic to the workers: age, gender, education, tenure and occupation. Organizational factors refer to the size of the company while my contextual factors are external to the employee and to the organization and they represent the country of the survey and the type of industry[6].

To test the hypotheses I estimate the following general assistance equation using Ordinary Least Squares[7]:

Assistance received = F (PR, Individual Autonomy, Team-level Autonomy, IPP*Individual Autonomy, Individual Autonomy*Team Autonomy, Individual, Organizational & Contextual Characteristics)

[6] For a detailed description of all the variables and of their expected effects see the Appendix.

[7] I used both OLS and O-LOGIT and I obtained similar results but in order to save space I will present only the results from the linear regression.

Results

I started to analyze the data by observing the descriptive statistics among the main variables of interest: piece rates, individual and team-level autonomy, age, gender, tenure and assistance. Then, I report a table with the correlations among the variables and finally test the hypotheses using OLS hierarchical regression analyses with four models: first, the basic model considers only the effect of control variables, the second one introduces direct effects, the third model considers also the influence of the moderator variable while the last model presents the most complete regression with interaction effects of the independent variables.

Table 1: Descriptive statistics

Variable	N	Mean	SD	Min	Max
1. Piece rates or productivity payments	8785	0.12	0.32	0	1
2. Individual autonomy	9666	2.12	1.09	0	3
3. Team autonomy	8126	0.61	0.49	0	1
4. Age	9867	40.17	11.54	15	99
5. Gender	9885	0.52	0.50	0	1
6. Tenure	9784	10.04	9.82	0	60
7. Assistance received in teams	8212	4.46	0.91	1	5
8. Assistance received by employees not working in a team	1583	4.22	0.03	1	5

Table 1 presents the descriptive statistics of the main variables of my research. Piece rates (PR), individual autonomy and team autonomy are the independent variables that influence employee assistance received in teams, while age, gender and tenure are control

variables describing the individuals. What is interesting to observe is that respondents generally received a high amount of assistance (4.46) and PR are not very common the mean is around 0. Also, I see that the average individual autonomy is 2.12 representing about two thirds of the total potential. Team autonomy is more balanced as its mean is 0.61 and tenure in a company is around 10 years.

Table 2 presents the correlations between the main variables of my research. I notice a negative and significant correlation between PR and individual autonomy (-0.07) and between PR and autonomy at team level (-0.05). There is also a negative correlation between team autonomy and gender (-0.07). Positive and highly significant correlations are found between PR and gender (0.08), between TBR and gender (0.05) and between team autonomy and assistance (0.08). The highest correlations are between individual and team autonomy (0.21) and between age and tenure (0.57). I also did a mean comparison test between the mean assistance received by the employees working in a team and the rest and I obtained that the difference between the groups was significantly different and people working in teams received more help: 4.46 compared to 4.22 ($p < .01$).

Table 2: Correlations among the main variables

Variable	1.	2.	3.	4.	5.	6.
1. Piece rates or productivity payments	-					
2. Individual autonomy	-0.07•	-				
3. Team autonomy	-0.05•	0.22•	-			
4. Age	-0.04•	0.03•	0.01	-		
5. Gender	0.08•	0.01	-0.07•	-0.01	-	
6. Tenure	-0.04•	0.04•	-0.00	0.57•	0.02	-
7. Assistance received in teams	-0.05•	0.14•	0.11•	-0.01	-0.01	-0.01

•Significant correlations using Spearman test correspond to $p<.01$

Table 3 presents the results of steps that I followed for testing the hypotheses. The assistance equation is estimated using Ordinary Least Squares. In Step 1 I consider only the effects of the control variables on assistance received in teams, Step 2 adds direct effects of PR and individual autonomy, step 3 considers also the moderator effect of team autonomy while the last step adds interaction effects between PR and individual autonomy and between individual and team-level autonomy. As noted before in the first stage of the analysis I focused on the direct effects of the independent variables. The first conclusion is that PR do not influence significantly the amount of assistance received in teams in any of the models meaning that hypothesis 1 is not supported. Hence, employees who receive PR do not receive less assistance from their colleagues. As for hypothesis 2 we observe that the coefficient of individual autonomy (H2) is positive and highly significant in all the models: 0.0787, 0.0685 and 0.0581 all for $p<.01$. Remember that Hypotheses 3 asserts that team autonomy affects positively the amount of assistance received in teams. Results from Table 3 confirm this hypothesis as the coefficient of autonomy at group level is positive and significant in all the models: 0.0931 and 0.0887 ($p<.01$).

In the next stage of the analysis, hypothesis 4, I consider the interaction between piece rates (or other productivity payments) and individual autonomy. Results from Table 3 show that the coefficient of this combined variable is positive and significant (0.0636) for a $p<.05$ suggesting that this hypothesis is also supported. What is interesting to notice is that PR alone do not affect assistance but in combination with individual autonomy they have a positive influence meaning that the positive effect of individual autonomy is so strong that it prevails also when it is used together with other variable. From a managerial point of view, this suggests that team members who receive PR do not receive more help but employees who enjoy both PR and individual autonomy receive also more assistance. The intrinsic motivation of this behaviour could lie in one of the following situations: either employees

may base their decisions on norms of reciprocity expecting that team-members with more autonomy will also be able to help them in the future, or employees may consider that team members with both PR and individual autonomy have a higher status in the group and is their obligation to help them. Either way, this hypothesis does not indicate a good Samaritan behaviour. However, combining it with the finding from the regression with fixed (regular) salary- it was obtained that team-members with fixed salary receive significantly more help- I may infer that employees tend to assist one another unconditioned by the level of autonomy.

In the last stage of the results I study the potential moderator effect of team autonomy as predicted by hypothesis 5. Findings from model 4 confirm this hypothesis as the coefficient of individual autonomy is positive and significant (0.0581 at $p<.01$), the coefficient of team-based autonomy is also positive and significant (0.0887 at $p<.01$) while the coefficient of the interaction between these two variables is negative and significant as expected (-0.0212 at $p<.05$). This result confirms that having too much responsibility may diminish the willingness to offer support. Moreover, it suggests that team members do not offer their help to a higher-status member (the boss effect) with both levels of individual and team autonomy high, as the coefficient of the interaction is not positive. Thus, in line with social-exchange theory I observe that team-members offer their help basing their decisions on both objective reasons like actual freedom or discretion to move across and assist their colleagues (autonomy) and on more subjective and altruistic motivations like offering help to fellow team-members in need (good Samaritan attitude).

I also ran O-LOGIT regression and I obtained similar findings, backing the majority of the hypotheses[8]. However, the only difference found regards the interaction between

[8]In order to check if our results are robust to a more general structure of errors, I ran tests with robust standard errors clustering after countries and I obtained the same significant results confirming the hypotheses.

individual and team autonomy which was not found significant suggesting that under some specifications the effect is significant (when using OLS) but it is not robust (the effect does not maintain under O-LOGIT). In order to study the potential effect of other type of performance-based compensation on the amount of assistance received I introduced team-based rewards in the regression but the coefficient of this variable came out insignificant. Thus, the promise of a shared reward does not influence helping behavior in groups.

Consequently, both individual and team-based autonomy are essential when it comes to assistance received in teams. As for the compensation type it was found that piece rates have an effect only in combination with individual autonomy potentially suggesting either a "boss"-effect, a very strong and overwhelming effect of individual autonomy or an uncovered motivator role of individual performance pay. For instance, employees who receive piece rates may consider offering assistance as beneficial through perceiving more rewards from sharing or helping (Siemsen et al., 2007) and consequently, if they also enjoy autonomy, receive more help due to the norm of reciprocity.

Table 3. Hierarchical regression analysis for piece rates and autonomy predicting assistance received in teams

Variables	*1*	*2*	*3*	*4**
Piece rates or productivity payments	-	-.0308 (0.03)	-.0326 (0.03)	-.0214 (0.03)
Individual autonomy	-	.0787••• (0.01)	.0685••• (0.01)	.0581••• (0.01)
Team Autonomy	-	-	.0931••• (0.02)	.0887••• (0.02)

Piece rates x Individual autonomy		-	-	-	.0636•• (0.03)
Individual Autonomy x Team Autonomy		-	-	-	-.0212•• (0.01)
Individual	Age	-.0056••• (0.00)	-.0049••• (0.00)	-.0042••• (0.00)	-.0041••• (0.00)
	Gender	.0795••• (0.02)	.0640••• (0.02)	0786••• (0.02)	.0762••• (0.02)
	Tenure	.0006 (0.00)	.0005 (0.00)	.0006 (0.00)	.0005 (0.00)
	Job title dummies	Yes	Yes	Yes	Yes
Organizational	Size dummies	Yes	Yes	Yes	Yes
Contextual	Industry dummies	Yes	Yes	Yes	Yes
	Country dummies	Yes	Yes	Yes	Yes
Number of observations		9745	8488	7008	7008
R^2		0.0818	0.0936	0.0855	0.0868
Adjusted R^2		0.0762	0.0871	0.0774	0.0784
Root MSE		.87557	.85395	.81723	.81678

Notes: The Assistance equation is estimated by OLS

• p<.1

•• p<.05

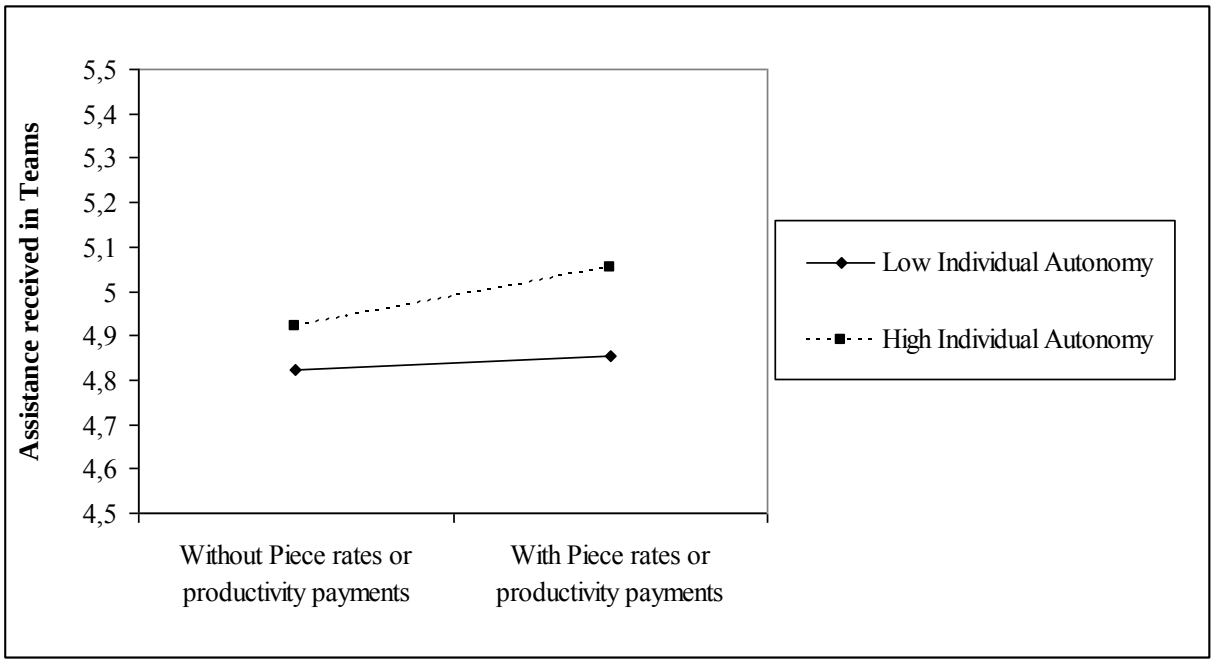
••• p<.01

[*] In this model I tested a regression with fixed salary also and found its influence on the amount of assistance received positive and significant

Discussion and Conclusions

The purpose of this study was to examine the relationship between performance pay, autonomy and employee helping behaviour in teams. In order to study the hypotheses of interest I considered also the role of individual and team-level autonomy.

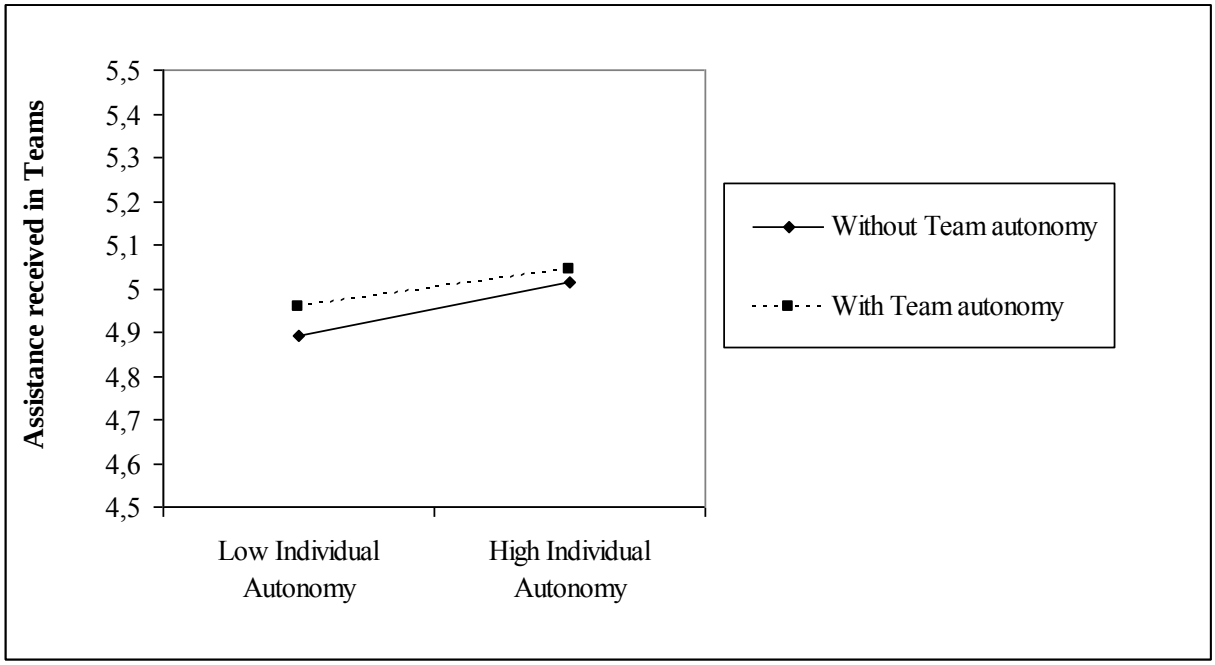
Several important findings emerge from this study. First, the results show that in the first stage of the analysis (H1, H2 and H3) Hypothesis 2 and Hypothesis 3 are entirely supported, while hypothesis 1 is not supported. Therefore, it seems that piece rates or other productivity payments are not associated with low helping behaviour. The results show that even if the coefficient of piece rates is negative in all the models (-0.03; -0.03 and -0.02) there is no significant connection between them and the amount of assistance received in teams. On the other hand, as expected, both individual and team autonomy influence positively the amount of help received in work groups. With respect to individual autonomy it may also be that employees with high levels of task discretion enjoy also higher status in the team and other employees may feel obliged to offer their help. In the second stage of the analysis, when considering the interaction between piece rates and individual autonomy (H4) I find a positive effect on assistance, as predicted by the model. The coefficient of this variable (0.06) is higher than the coefficient of individual autonomy (0.05) suggesting that the effect of individual autonomy increases when combined with productivity payments. The shape of this interaction is illustrated in Figure 3:



This figure reflects that in the case of low individual autonomy employees who are paid according to piece rates receive almost the same amount of assistance as team-members who do not receive productivity payments. Nevertheless, in the case of high individual autonomy, employees with piece rates receive more help. An explanation for this could be that once given high autonomy employees paid according to their productivity are prone to offer and consequently receive more help. This confirms H4 which stated the importance of the positive effect of autonomy.

Finally, in stage III, the interaction between individual and team autonomy is found negative and significant supporting Hypothesis 5. Consequently, as both coefficients of individual and team autonomy are positive and significant while their interaction is negative and significant, team autonomy plays the moderating role between individual autonomy and help received in groups.

The shape of the interaction is shown in Figure 4:



This suggests that when given high levels of both individual and team autonomy team-members receive more assistance. However, in the case of low individual autonomy, employees with high team autonomy receive more help confirming that at least one type of autonomy is required in order to benefit from colleagues assistance. I observe that employees with high individual and team autonomy alone receive more help indicating a potential norm of reciprocity along with Good Samaritan predictions. Nevertheless, in the case of employees with simultaneously high individual and team autonomy we find less assistance suggesting that team workers offer their help from altruism and because they are able to do so than basing their decisions on reciprocity expectations. As argued before, having simultaneously high both types of autonomy I control for the potential effect of a high status member who received help from his or her colleagues who may feel obligated to respond to requests of help. Having found the effect of total autonomy on the amount of assistance received negative rules out the "boss" effect. Consequently, it looks like hypothesis 5 sheds some light on why team-members receive help. If at the beginning there were four possibilities: either because of the compensation, of the norms of reciprocity, of the "boss" effect or genuine

altruism now we found that the compensation is not significant (H1 not supported) and the reciprocal behavior and "boss" effect are ruled out (H5 supported). Therefore, the good Samaritan attitude is present in teams.

An implication of these findings is that managers should offer employee autonomy- individual or team-based but not simultaneously both- in order to be able to answer to other requests of help. Surprisingly, it appears that when workers receive productivity rewards and simultaneously enjoy high autonomy they receive more assistance from their colleagues, suggesting that the effect of high individual autonomy is very powerful.

Limitations, Future Research and Managerial Implications

This study presents some limitations that have to be looked at carefully. First, this research is a cross-sectional analysis; there is only one period of time, between September and November of 2005. It would be interesting to study if the findings change when we conduct a time series analysis. The second limitation of this study is due to data availability: the survey does not offer information about team composition or the exact percentage of piece rates or productivity payments applied, the data showing only if employees receive this type of compensation or not. The same shortcoming refers to the payment based on group performance. For future research it would be interesting to compare the percentage of piece rates with the percentage of team-based compensation. Another limitation refers to data availability about genuine altruistic behaviors. This paper estimated genuine help trough different variables but it is important to study its effects through questions that regard it directly. However, due to the nature of altruism, it is a construct difficult to measure and we may overcome the shortcomings of a general survey by developing a more focused questionnaire with questions that capture true Good Samaritan attitudes (and even then these can be biased: for instance in the case of a small team honest answers can create disruption).

It will be also interesting to study the amount of help given in teams in order to have a more direct relationship as the independent and dependent variables refer in this case to the same person.

Another direction for future research would be to investigate the role of task interdependence when it comes to helping behaviour as providing more help was associated with help givers having higher individual autonomy and jobs interdependent with the help-seekers' jobs (Anderson & Williams, 1996). It would be interesting to find a proxy for this variable and study its effect on helping behaviour in the context of this paper. Researchers may also be interested in the personality type of the employee (Tang, Sutarso, Davis, Dolinski, Ibrahim and Wagner, 2007) in terms of intrinsec and extrinsic motivations in order to reveal genuine altruistic behavior.

Finally, the contribution of this study demonstrates that both individual and team-based autonomy influence positively the amount of assistance received in teams. Moreover, when individual autonomy interacts with piece rates its effect is increased while when it interacts with team autonomy its combined effect diminished. The last finding confirms precious research which considered the cancelation effect obtained when one uses both types of autonomy (Uhl-Bien & Graen, 1998; Kirkman & Rosen, 1999).

Taken together, my results imply that both productivity based rewards and autonomy are important tools when it comes to determining employee helping behaviour. Managers should know when to introduce rewards based only on individual merits so as to keep their workers motivated and willing to help their team-mates. Moreover, managers should give employees autonomy in order to be able to move across and offer their assistance to others. As for genuine altruistic behaviour encompassed through the term of "the good Samaritan" it seems that employees who receive help are the ones with high individual or team autonomy and the ones with productivity based-salaries and high job discretion. Consequently, the only

true altruism could come from the case of team autonomy, case in which employees help because they perceive their goals and the ones of other team members as related and they either expect reciprocity in the future (not true altruism) or simply help because it is easier in this context to share and see the similarities among people in teams (good Samaritan attitude). By carefully examining the results we observe that employees with high individual or team autonomy alone receive more help indicating a potential norm of reciprocity along with Good Samaritan predictions. Nevertheless, in the case of employees with simultaneously high individual and team autonomy we find less assistance suggesting that team workers offer their help from altruism and because they are able to do so than basing their decisions on reciprocity expectations.

CHAPTER THREE

Team Participation and Career Advancement

"Great teamwork is the only way we create the breakthroughs that define our careers."
(Pat Riley)

Introduction

The goal of this paper is to analyze the relationship between team affiliation and career advancement prospects by thoroughly investigating both the determinants and consequences of group participation. Scholars usually consider teams as groups of people who work together for the accomplishment of a common goal set by a higher authority in the firm. The goal could be temporary, as in case of project or problem-solving teams or permanent as in the case of production teams. Team working has become widely used in the last decades, being praised for its advantages for productivity (Gomez-Mejia & Balkin, 1989; Hamilton, Nickerson & Owan, 2003), cooperation (Miller and Hamblin; 1963, Rosenbaum et al., 1980; Shea and Guzzo, 1989; Van der Vegt et al, 2003; Encinosa, Gaynor and Rebitzer, 2007; Bamberger and Levi, 2009) and knowledge sharing (Siemsen, Balasubramanian & Roth, 2007). However, the direct effect of team affiliation on career advancement has received little attention.

With respect to the consequences of team affiliation, the evident connection between productivity and promotion has been thoroughly studied in previous literature (Doeringer & Piore, 1971; Seltzer & Merrett, 2000; Baker, Gibbs & Homstrom, 1994a; Devaro, 2006) but the complex set of variables (individual and group characteristics such as the level of education, tenure, individual and team autonomy) that affect advancement beyond this needs further investigation. Moreover, once inside the team, it is interesting to analyze which factors, individual or group characteristics, may affect perceived career advancement

prospects. Among the individual variables, previous literature has focused mainly on employee age and gender. My research considers that there are also other individual characteristics that may affect employee participation in teams and career advancement such as employee´s level of education (Spilerman & Lunde, 1991; Chao & Ngai, 2001) and tenure (Ishida, Su & Spilerman, 1995).

Another individual characteristic that influences employee perceived satisfaction and helping behavior is individual autonomy (Godeanu, 2009; Godeanu, 2010). But does it affect promotion perspectives as well? Past literature considered that at team level, individual autonomy is insufficient unless it is not complemented with team autonomy (Spriggs, Jackson & Parker, 2000). Thus, for group characteristics, my research proposes to examine team autonomy in the form of both team members´ choices upon the division of tasks and as discretion over the choice of the team leader. Consequently, this paper aims at narrowing the gap from previous literature by analyzing both the antecedents and consequences of team affiliation through studying the effects of education, tenure and employee discretion on career prospects.

Antecedents and Consequences of Team Affiliation

Before analyzing the consequences of team participation we should first examine its antecedents. To start with, employee characteristics could provide a good insight in understanding why people work in teams. According to employee learning, education attainment and tenure should determine to a great degree firms´ decision to create teams. A limitation of the previous literature is that it did not analyze thoroughly the effect of worker heterogeneity on worker selection or participation in teams. Therefore, it will be interesting to study how different employee characteristics affect team affiliation. Given that literature has examined team participation mainly for productivity reasons (Hamilton,

Nickerson and Owan, 2003) I aim to take a step further by examining other rationales for team participation and the effect of team affiliation on career prospects. Bonet (2008) has found that seniority is no longer the unique criteria for advancement and that the value of experience changes once individuals accumulate further education. Hence, it is important to analyze to what extent employees' experience and education influence their voluntary or assigned participation in a team. Will high-educated and high-experienced workers be more probably part of a group? And once people freely decide to be part of a team or are assigned to one by the management which individual or job design characteristics lead to higher career advancement prospects?

This research proposes to empirically explore these questions. The goal is to determine the extent to which individual characteristics contribute to employee allocation to teams and the link between team participation and career advancement. Teams have become widely used in the last decades and their advantages for productivity (Gomez-Mejia & Balkin, 1989; Hamilton, Nickerson & Owan, 2003), cooperation (Miller and Hamblin; 1963, Rosenbaum et al., 1980; Shea and Guzzo, 1989; Van der Vegt et al, 2003; Encinosa, Gaynor and Rebitzer, 2007; Bamberger and Levi, 2009) and knowledge sharing (Siemsen, Balasubramanian & Roth, 2007) have been already acknowledged. Nevertheless, the direct effect of team affiliation on career opportunity has not yet been discussed. Likewise, once inside the team, it is interesting to analyze also which factors, individual or group characteristics, may affect perceived promotion prospects.

Determinants of Team Affiliation

While past literature established the relationship between worker ability (i.e. skills) and team productivity (Hamilton et al. 2003) it offers few insights into how employee heterogeneity in terms of education attainment and tenure affects team affiliation. A benefit of heterogeneity derives from mutual learning (Lazear, 1998). As Hamilton, Nickerson and Owan (2003) argue more skillful workers in terms of technical abilities "might teach the less skillful how to execute tasks better and more quickly" but knowledge transfer among workers may be enhanced when employees possess collaborative skills facilitating learning. Also, in garment industry informal training by other team members is widely spread (Berg et al., 1996) while small businesses prefer informal learning processes as well (Marlow, 1998; Billett et al., 2003). The empirical work of Tannenbaum (1997) and Billett (2001) found co-workers as being relevant sources of work-related learning while in Coetzer (2007) study workmates represent the most useful source of learning.

If previous literature was concerned mainly with diversity of worker ability in terms of performance (Hamilton et al., 2003) I take a step further and investigate other individual characteristics that may determine an employee to be part of a team (i.e. tenure and education). Either workers decide by themselves or are assigned to different teams it is important to study which are the antecedents of team affiliation beyond productivity. Teams benefit not only from technical and collaborative skills but also from socialization which contributes to more enjoyable tasks. Psychologists consider that increasing variety and significance of tasks while enhancing social interaction leads to higher intrinsic motivation (Staw et al., 1980) which in turn could raise employee involvement, cooperation and career prospects. Coetzer (2007) finds that respondents with no post-school qualifications and workers with shorter tenure regarded their work environment conditions in terms of learning opportunities more favorably indicating that higher education and tenure represent an

important source of learning for them. Thus employees´ tenure and education are essential when it comes to learning inside organizations. Moreover, teams are considered important sources of learning and knowledge sharing (Hamilton et al., 2003; Siemsen, Balasubramanian & Roth, 2007). According to this view I expect that employees with higher education level and tenure to participate in teams in order to inspire and teach their co-workers (i.e. employees with higher tenure know better the policies, the routines and the behavior of the company).

Consequences of Team Affiliation

Even if the connection between productivity and promotion was studied thoroughly in previous literature (Doeringer & Piore, 1971; Seltzer & Merrett, 2000; Baker, Gibbs & Homstrom, 1994a; Devaro, 2006) the complex set of variables that affect advancement beyond this needs further investigation. Scholars consider teams as important sources of learning and knowledge sharing (Hamilton et al., 2003; Siemsen, Balasubramanian & Roth, 2007). Hamilton, Nickerson and Owan (2003) find that heterogeneous teams in terms of high and low-skilled workers were more productive. From social networks theory perspective, teams with strong interpersonal ties or teams that are central in their intergroup network tend to perform better (Balkundi & Harrison, 2006). Thus, how performance is connected to promotion, being part of this type of groups implies higher probability of career advancement. Consequently, following previous literature findings that connect productivity and promotions directly, I expect that working in teams has also an effect on career advancement:

H1: Team affiliation increases perceived career advancement prospects

While previous literature documents the impact of education on career advancement (Blau & Duncan, 1967; Jencks et al., 1972, Mincer, 1974; Rosenbaum,

1979, Wise, 1975b, Spilerman & Lunde, 1991; Chao & Ngai, 2001) it also offers mixed results. On one hand education is regarded as an important signal about the competence level or productivity of an employee (Gintis, 1971; Arrow, 1972; Spence, 1973; Spilerman & Lunde , 1991) but on the other hand it is argued that there is no direct link between higher education and promotion, considering competency level and the level of competitiveness as main requirements for good career prospects (Chao and Ngai, 2001).

In addition, the status-attainment literature assumes that the number of years of schooling captures the full effect of education (Faia, 1981) while economists consider that labor force experience can be substituted for schooling (Blaug, 1976; Sicherman, 1991). However, both economists and sociologists agree that education credentials or certification of a specific degree, regarded as different from years of schooling, convey relevant information about the minimum standard of performance (Faia, 1981; Collins, 1979; Spilerman & Lunde, 1991). Spilerman and Lunde (1991) find that education, measured through the numbers of years of schooling, credentials, quality of the undergraduate school and college major, varies with organizational rank and that firms do not reward educational background alone but only when it contributes to productivity. However, employees may gain additional skills or abilities from education that substitute for work skills (Bonet, 2008) and thus education by itself can represent a valuable asset.

Even if previous literature regarding the relationship between education and career advancement offered mixed results, in the framework of human capital model, educational credentials enhance productivity (Gintis, 1971; Arrow, 1973). Spilerman & Lunde (1991) claim that credentials "tap heterogeneity among workers rather than differences in learned skills"(p. 693). In line with this, I predict that higher the education level attained higher the perceived career opportunities:

H2a: The level of education influence team members´ career advancement

The issue of labor force experience has also been a focus of past research. This theme has been presented differently. The late selection model states that employees in the same entry level who share the same educational level also have a similar career progression during the first years at a company (Tachibanaki, 1992; Tomita, 1992; Ishida, Su & Spilerman, 2002). Examining promotion profiles of Japanese employees with college degrees working in a manufacturing company, Matsushige (1995) shows that no one was promoted to managerial rank in the first ten years. Likewise, using a survey of 640 Japanese firms Nihon Rodo Kenkyu Kiko (1993), find that about two-thirds of the respondents were not differentiated during five years after entering into the company. This late selection is possible in Japan due to the limited opportunities for former employees in the external market (Prendergast, 1992). Nevertheless, the tournament model stating that employees with faster promotion rates in initial ranks have better advancement prospects in subsequent ranks, characterizes the majority of firms (Hanada, 1987; Ishida, Su & Spilerman, 2002). Baker, Gibbs & Holmstrom (1994a) look at the internal organization of the firm, especially at the number of people who move from one job title to another and find that initially, the new employees are promoted more quickly than the incumbents. Likewise, they find that people are always promoted after five years, confirming the prediction of the late selection model and also evidence of "fast tracks" supporting the tournament model.

Consequently, past literature predicted different outcomes with respect to the relationship between tenure and promotions. While the late selection model predicts that high tenure increases the probability of advancement, according to the tournament theory employees promoted first have an advantage "in retaining the right to compete for higher position" (Ishida, Su & Spilerman, 2002: p.181). Following, the premises of

late selection model and noticing that researchers find a fix period in which employees are retained at the same job title, I expect that perceived career opportunities increase with tenure:

H2b: The higher the number of years spent in a firm the higher team members´ perceived career advancement prospects

Employee discretion and career prospects

Another individual characteristic that deserves particular attention is autonomy. Previous research finds that it influences both satisfaction (Lawler, 1971; Greenberg, 2006; Haar & Spell, 2009; Godeanu, 2009) and cooperation (Tjosvold and Yu, 2004; Oosterhof, Van der Vegt, Van de Vliert and Sanders, 2009; Godeanu, 2010). Furthermore, Bonet (2008) finds a positive association between promotions and high involvement jobs suggesting the importance of employee discretion. Taking into consideration its essential role when it comes to employee behavior it will be interesting to investigate if autonomy affects perceived career prospects as well.

This paper explores the influence of individual discretion on promotion as I expect that higher employee control over his methods, speed of work or his tasks increases his perceived opportunities. In general and especially in teams, if workers have control over their tasks they may perceive that they have an important part in the company and may expect a promotion in the near future:

H3: Within teams, individual autonomy leads to high perceived career prospects

In addition, in a team setting, scholars claimed that individual autonomy is insufficient unless it is complemented with team autonomy (Spriggs, Jackson & Parker, 2000). Thus, this paper considers autonomy at both individual and group level. My research proposes to examine team autonomy in the form of team's freedom of choice over both the division of

tasks and the team leader. People may consider that enjoying this discretion may convey a positive signal regarding their career opportunities. For instance, having the freedom to choose a team leader from the group increases the probability of one's promotion as a type of self-fulfilling prophecy: when employees have control over who will lead their team (who will be promoted) they also control their own career prospects. Therefore, I predict that high team discretion measured in both forms leads to expected career advancement:

H4a: Team autonomy in the form of team choice over the division of tasks increases perceived career opportunities

H4b: Team autonomy in the form of team freedom of choice over the team leader leads to high perceived career prospects

Methodology:

The data that I use in this paper comes from the fourth European Working Conditions Survey conducted in 2005 by the European Foundation for the Improvement of Living and Working Conditions which provides an analysis of working conditions in the 27 countries of the European Union, in the two candidate countries (Turkey and Croatia), in Switzerland and Norway. The unit of analysis is the individual and the observations are cross-national. The survey sampled the total active population of the respective nationalities of the EU member states, aged 15 years and over, resident in the countries involved in the survey.

Team Affiliation: dependent variable in the first part of the analysis and independent in the second part. It uses variable q26b from the survey: "Does your job involve doing all or part of your work in a team?" and is a dummy variable which takes value 1 for team-members and 0, otherwise.

Education: independent variable in both parts of this study. It uses ISCED classification of education from the survey "the highest level of education or training" and has a dummy variable for each of the 7 levels (i.e. no education, primary education, lower, upper and post secondary education, tertiary education-first level and tertiary education-advanced level).

Tenure: independent variable. Represents the number of years a respondent has been employed at his/her current company. It -uses variable q2d from the survey

Individual Autonomy: explanatory variable representing an index variable which combines three dummy variables: employee methods of work, the order of tasks and the speed of work. It uses variable q24a,b,c from the survey. This paper follows the construction of task autonomy from Molleman (2009): "task autonomy reflects the freedom an employee has to make decisions about goals (what), work methods (how), and planning issues (when)" but it does not limit individual autonomy to task autonomy, as it considers also the order of tasks.

Team Autonomy: is an independent variable measured through two different dummy variables variable: variable q26b_1a from the survey: "Do the members of the team decide by themselves on the division of tasks?" and variable q26b_1b "Do the members of the team decide by themselves who will be head of the team?". Each of these variables takes value 1 for the positive answer and 0, otherwise. I added group discretion to individual autonomy by following the arguments from the previous literature that considered advisable to look at multiple levels (Seibert, Silver and Randolph, 2004). Moreover, Spriggs, Jackson & Parker, (2000) argued that autonomy should be "truly collective, distributed throughout the team so that each team-member must have both autonomy to act and the ability to influence others to act".

Controls: are classified into individual, organizational and contextual. The individual group refers to the factors that are idiosyncratic to the workers: age, gender and occupation.

Organizational factors refer to the size of the company while my contextual factors are external to the employee and to the organization and they represent the country of the survey and the type of industry[9].

Results

The analysis was started by observing the descriptive statistics and correlations among the main variables considered potential antecedents of team affiliation: education level and tenure, and other individual control variables: age, gender, individual autonomy and job title.

Table 1: Descriptive statistics and correlations (Part I)

Variable	N	Mean	SD	1.	2.	3.	4.	5.	6.	7.
1.Team Affiliation	24706	0.5978	.4903	1						
2. Education level	25009	3.3406	1.2853	0.1123*	1					
3. Tenure	24586	9.8887	10.0040	0.0060	-0.0214*	1				
4. Age	24965	40.8872	12.0131	-0.0359*	-0.0177*	0.4966*	1			
5. Gender	25009	0.4978	0.5000	0.0271*	-0.1005*	0.0644*	0.0052	1		
6. Individual autonomy	24978	2.0734	1.1330	-0.0531*	0.1763*	0.0834*	0.0723*	0.0216*	1	
7. Job title	25009	5.0091	2.6051	-0.0604*	-0.4868*	-0.0949*	-0.0597*	0.1210*	-0.2305*	1

*Significant correlations using Spearman test correspond to $p<.05$

[9] For a detailed description of all the variables and of their expected effects see the Appendix.

What is interesting to observe in table 1 is that is that team working is moderately distributed among the respondents, the mean value of the coefficient being 0.5978, out of 1. Education level has a mean of 3.3406 out of 6 suggesting that employees present an average level situated between upper and post-secondary education. The average tenure at a company is around 10 years (9.8887), the average age around 40 (40.8872) and the sample is equally distributed between men and women (0.4978). As for individual autonomy we observe that generally workers enjoy a moderately towards high level of discretion, its coefficient being 2.0734[10]. The most common job title belongs to service workers, shop and market sales workers, with a corresponding value of 5. Regarding the correlations part of the table, we note significant correlations ($p<.05$) between all the variables expect between gender and age and, contrary to our expectations, between tenure and team affiliation.

In the following analysis, results for sub-samples of respondents within the demographic variables of interest are presented facilitating the comparison of means regarding team affiliation. In presenting the findings relating to education and tenure, the focus is on the two sub-sets of employees considered most probably to be part of a team: newcomers and/or low educated workers who would most likely have to face learning processes inside the firm from employees with longer work experience in the organizations and/or highly educated. Following the distinction of Coetzer (2007) we consider as newcomers workers with tenures of less than two years and we compare their results to the results for employees with longer tenure (over six years). Similarly, the results for low educated workers (no education or primary education) will be compared to the results for high educated respondents (tertiary education). Such comparisons may offer an insight of the antecedents of team affiliation from a learning stand point. Results from Table 2 indicate that there is a statistically significant difference between team-members and

[10] Individual autonomy is an index variable with values 0, 1, 2 or 3. When the index has value 0 it means that the employee has no discretion over his methods of work, speed or order of tasks, while a value of 3 suggests that the employee has complete discretion over all of these three measures.

employees not working in a team with respect to career prospects, confirming through a Wilcoxon rank-sum (Mann-Whitney) test that team-members had higher rank (z = -13.935, p = 0.000). This finding is in line with hypothesis 2 which predicts that team affiliation leads to higher career opportunities. As for tenure, we note that there is no significant difference between newcomers and employees with tenure higher than 6 years with respect to team participation. However, when it comes to promotions, there is a statistically significant difference between the group of newcomers and the group of old-timers: Pearson chi2(4) = 174.8521, Pr = 0.000. On the other hand, the difference in education level, between low (no education or primary) versus high (tertiary) was significant for both team affiliation: Pearson chi2(1) = 248.1102, Pr = 0.000 and career prospects: Pearson chi2(4) = 767.6553, Pr = 0.000.

Table 2a. Team Affiliation as a function of education and tenure differences:

Variables	Mean	Standard Deviation	Test statistics: chi2
Low education	0.4666	0.4990	248.1102***
High education	0.6623	0.4730	
Newcomers	0.5914	0.4916	0.8906
Oldcomers	0.5984	0-4902	

***Pr<0.01

Table 2b. Career opportunities as a function of education, tenure and team participation:

Variables	Mean	Standard Deviation	Test statistics:
Low education	2.1065	1.1315	767.6563***
High education	2.9923	1.2461	
Newcomers	2.7223	1.3011	174.8521***
Oldcomers	2.5402	1.2048	
Team members	2.6976	1.2429	-13.9350***
Not team members	2.4732	1.2244	

***Pr<0.01

Which variables are associated with team participation?

In table 3 we report the findings from three models: model 1 considers our independent variable and only individual controls, model 2 presents also industry and country effects, while the last model adds the influence of all control variables. Results of the logistic regression suggest that in the first two models post-secondary and tertiary education (compared to no education) and tenure are important for team participation, confirming that higher level of education and tenure lead to higher probability of team affiliation. Nevertheless, when we consider the influence of all the controls, the effects of education and tenure disappear. The only variable that makes the difference from model 2 to model 3 is company size: when we control for small, medium and large firm dummies we find that all these categories, compared to micro-enterprise, are significant for team participation, in the sense that as higher the size of the company, higher the probability of forming teams. The coefficient for small enterprise is 2.08 ($p<0.01$), for medium is higher 2.1441 ($p<.01$) and for large firms is the highest, 2.8885 ($p<0.01$).

In all three models, when we control for individual, firm and contextual characteristics simultaneously, age, gender and individual autonomy were found significant ($p<.01$) suggesting that individual autonomy, even if it affects negatively team participation, 0.9144 in model 3, it is an important tool to be considered in the second part of our analysis, as a potential determinant of perceived advancement prospects.

Table 3: Variables influencing team participation

Variables	Model 1		Model 2		Model 3	
1. Primary education	1.2014	(0.1809)	1.2298	(0.2053)	1.1679	(0.2025)
2. Lower secondary education	1.4313**	(0.2112)	1.0336	(0.1708)	0.9674	(0.1663)
3. Upper secondary education	1.7321***	(0.2517)	1.1701	(0.1916)	1.0467	(0.1783)
4. Post-secondary education	2.3276***	(0.3490)	1.4030**	(0.2379)	1.2672	(0.2234)
5. Tertiary education-first level	2.3838***	(0.3543)	1.4542**	(0.2434)	1.2445	(0.2166)
6. Tertiary education-advanced level	2.3273***	(0.3984)	1.5669**	(0.3001)	1.2882	(0.2562)
7. Tenure	1.0077***	(0.0017)	1.0065***	(0.0018)	1.0009	(0.0019)
8. Age	0.9895***	(0.0013)	0.9850***	(0.0015)	0.9866***	(0.0016)
9. Gender	1.1034***	(0.0318)	1.0935***	(0.0361)	1.0590*	(0.0363)
10. Individual autonomy	0.8898***	(0.0111)	0.8799***	(0.0121)	0.9144***	(0.0131)
11. Legislators and managers	1.2769***	(0.0801)	1.2558***	(0.0894)	1.3375***	(0.0984)
12. Professionals	1.4246***	(0.0833)	1.1787**	(0.0805)	1.0782	(0.0764)
13. Technicians	1.6091***	(0.0850)	1.3682***	(0.0845)	1.3025***	(0.0839)
14. Clerks	1.0563	(0.0548)	0.9544	(0.0571)	0.8714**	(0.0543)
15. Services workers	1.1550***	(0.0596)	1.1132*	(0.0681)	1.1278*	(0.0721)
16. Agriculture workers and fishermen	0.8909	(0.0727)	0.9316	(0.1083)	1.1106	(0.1336)
17. Craftsmen	1.7435***	(0.0911)	1.3287***	(0.0812)	1.3491***	(0.0859)
18. Plants and machine operators	1.2095***	(0.0730)	0.9465	(0.0646)	0.8730*	(0.0621)
19. Armed forces	3.3150***	(0.7194)	2.6154***	(0.5958)	1.9004***	(0.4431)
20. Small enterprise	-		-		2.0800***	(0.0790)
21. Medium enterprise	-		-		2.1441***	(0.0947)
22. Large enterprise	-		-		2.8885***	(0.1574)
10 Industry dummies	No		Yes		Yes	
30 Country dummies	No		Yes		Yes	

Number of observations	24230	21957	21234
LR chi^2	778.03	1651.90	2215.94
Pseudo R^2	0.0239	0.0564	0.0783

Notes: Standard errors are in parentheses
*p<.1
**p<.05
***p<.01

Part 2: Teams and Career Advancement

In the second stage of our analysis we focus on the drivers of promotions, others than productivity, as perceived by employees from the European Union. In table 4 we report the descriptive statistics and correlations among team affiliation, perceived career prospects and individual autonomy in the form of freedom over the methods of work, order of tasks and speed of work. Results indicate that perceived career opportunity is 2.6082 (this variable ranges from 1 to 5) suggesting that employees perceive they have possibilities of promotion below average. With respect to individual autonomy, respondents present high discretion especially over the speed of work (0.7210 from 1), but also over their methods (0.6880) and order of tasks (0.6644). As for correlations, in table 4 we report significant correlations between all the variables.

Table 4: Descriptive statistics and correlations (Part II)

Variable	N	Mean	SD	1.	2.	3.	4.	5.
1.Team Affiliation	24706	0.5978	0.4903	1				
2. Career Opportunity	24508	2.6082	1.2400	0.0895*	1			
3.Freedom over Methods of work	25009	0.6880	0.4633	-0.0287*	0.1170*	1		
4. Freedom over order of tasks	25003	0.6644	0.4722	-0.0381*	0.1315*	0.5562*	1	
5. Freedom over Speed of work	24984	0.7210	0.4485	-0.0418*	0.0937*	0.4883*	0.4576*	1

*Significant correlations using Spearman test correspond to $p<.05$

Once inside the team we want to analyze which variables influence employee perception regarding career advancement prospects. In first part of this research we found that education level, tenure and employee discretion have a significant influence on team participation. Furthermore, in a team setting, employees have individual characteristics like education, tenure and individual discretion but they are also endowed with team autonomy. This paper explores group discretion in the form of the choice of the team over both the division of tasks and the team leader.

Table 5 examines the influence of these factors on perceived advancement prospects by considering three models. Model 1 presents the influence of the education and tenure, model 2 adds the role of team affiliation, while model 3 focuses on both employee characteristics and team discretion. Results from an ordered logistic regression analysis show that the influence of team affiliation on career advancement is positive and significant, its coefficient being 1.1848 ($p<.01$), and thus as predicted by hypothesis 1. Moreover, in all three models higher education influences positively promotion probability,

the coefficients being higher for tertiary education-advanced level, with values of 2.8173, 3.2924 and 2.5200 respectively ($p<.01$). These findings confirm hypothesis 2a. As for hypothesis 2b, we note that the coefficients for tenure are not significant in any model suggesting that this hypothesis is not supported. Remember that hypothesis 3 connected individual autonomy to high perceived career prospects. The value of its coefficient in model 3 is 1.2162, significant at $p<.01$, confirming our expectations. What is interesting to observe is the behavior of team discretion which consists of two independent variables: the choice of the team over the division of tasks (hypothesis 4a) and the choice of the team over the team leader (hypothesis 4b). Even if the coefficient of the division of tasks is positive (1.0245), it is not significant for career advancement. This suggests that team members do not associate their freedom over the division of tasks with career opportunities, most likely because this autonomy does not favor anyone in particular. If the whole group enjoys this discretion, no one is differentiated from a managerial stand-point. On the other hand, as predicted by hypothesis 4b, the freedom of choice over who will lead the team has a positive and significant effect on promotions, as expected. Its coefficient, 1.1554 ($p<.01$) is higher than the coefficient of the division of tasks 1.0245 and reflects the importance of this decision: having the freedom to choose a team leader from the group increases the probability of one's promotion as a type of self-fulfilling prophecy. When employees have control over who will lead their team, which is a synonym for who will be promoted, they also control their own career prospects. Managers should be careful when endowing teams with this type of discretion as personal interests or small groups of influence inside the team can prevail over objective stand points as skills, merits and productivity.

With respect to the control variables we note that age has a negative effect on perceived promotion probability in all three models suggesting that older employees perceive less career prospects (0.9723, 0.9729 and 0.9730, respectively at $p<.01$), while

gender indicates that men perceive themselves with more opportunities compared to women (the coefficient of gender is higher than one and significant at p<.01 in all models). As for job title, employees with higher status (i.e. managers, professionals, and technicians), clerks, craftsmen, service workers and respondents from armed forces, consider having more career opportunities than employees from elementary occupations. Also employees working in larger companies enjoy significantly more prospects than the ones from micro enterprises, the coefficient of large size being 1.1210 significant at p<.05 in model 1, 1.1012 significant at p<.05 in model 2 and 1.1590 respectively in model 3, significant at p<.01.

Table 5a: Team-members and Career Advancement:

Variables	Model 1	Model 3
1. Team Affiliation	Yes	Yes
2. Individual autonomy	-	1.2162*** (0.0197)
3. Team decides the division of tasks	-	1.0245 (0.0368)
4. Team decides the team leader	-	1.1554*** (0.0446)
5. Primary education	1.1747 (0.2779)	1.1382 (0.2753)
6. Lower secondary education	1.3928 (0.3250)	1.3798 (0.3290)
7. Upper secondary education	1.6108 (0.3726)	1.5453* (0.3650)
8. Post-secondary education	1.9579*** (0.4615)	1.8691*** (0.4501)
9. Tertiary education-first level	2.2144*** (0.5186)	2.0040*** (0.4795)
10. Tertiary education-advanced level	2.8173*** (0.7133)	2.5200*** (0.6522)
11. Tenure	1.0003 (0.0020)	0.9983 (0.0021)
12. Age	0.9723*** (0.0017)	0.9730*** (0.0018)
13. Gender	1.3920*** (0.0511)	1.3399*** (0.0505)

14. Legislators and managers	3.3244***	(0.2724)	2.9828***	(0.2531)
15. Professionals	2.4453***	(0.1862)	2.2267***	(0.1748)
16. Technicians	2.2082***	(0.1550)	2.0913***	(0.1510)
17. Clerks	2.0251***	(0.1448)	1.9077***	(0.1403)
18. Services workers	1.4904***	(0.1078)	1.4527***	(0.1085)
19. Agriculture workers and fishermen	0.9486	(0.1407)	0.8371	(0.1303)
20. Craftsmen	1.1877**	(0.0802)	1.1656**	(0.0808)
21. Plants and machine operators	0.9219	(0.0724)	0.9735	(0.0785)
22. Armed forces	2.6162***	(0.5031)	2.8529***	(0.5572)
23. Small enterprise	0.9718	(0.0406)	0.9943	(0.0428)
24. Medium enterprise	0.9847	(0.0464)	1.0343	(0.0503)
25. Large enterprise	1.1210**	(0.0611)	1.1590***	(0.0650)
10 Industry dummies	Yes		Yes	
30 Country dummies	Yes		Yes	
Number of observations	13089		12467	
LR chi^2	1982.65		2090.75	
Pseudo R^2	0.0492		0.0545	

Notes: Standard errors are in parentheses
*p<.1
**p<.05
***p<.01

Table 5b: Employees and Career Advancement in the European Union:

Variables	Model 2
1. Team Affiliation	1.1848*** (0.0320)
2. Individual autonomy	-
3. Team decides the division of tasks	-
4. Team decides the team leader	-
5. Primary education	1.4180** (0.2261)
6. Lower secondary education	1.7052*** (0.2692)
7. Upper secondary education	1.8993*** (0.2973)
8. Post-secondary education	2.3218*** (0.3735)
9. Tertiary education-first level	2.7046*** (0.4312)
10. Tertiary education-advanced level	3.2924*** (0.5856)
11. Tenure	1.0022 (0.0016)
12. Age	0.9729*** (0.0013)
13. Gender	1.3887*** (0.0401)
14. Legislators and managers	3.0222*** (0.1904)
15. Professionals	2.8027*** (0.1686)
16. Technicians	2.4219*** (0.1323)
17. Clerks	1.9815*** (0.1063)
18. Services workers	1.6259*** (0.0897)
19. Agriculture workers and fishermen	1.2326* (0.1329)
20. Craftsmen	1.3308*** (0.0713)
21. Plants and machine operators	0.9293 (0.0563)
22. Armed forces	2.4390*** (0.4123)
23. Small enterprise	0.9979 (0.0325)

24. Medium enterprise	0.9725	(0.0364)
25. Large enterprise	1.1012**	(0.0491)
10 Industry dummies	Yes	
30 Country dummies	Yes	
Number of observations	20874	
LR chi^2	3263.14	
Pseudo R^2	0.0510	

Notes: Standard errors are in parentheses
* p<.1
** p<.05
*** p<.01

Discussion and Conclusions

The objective of this paper was to investigate the relationship between team affiliation and career advancement prospects by carefully examining both the antecedents and consequences of team participation. In order to overcome the contradictory results from the literature my research proposes to study the direct effects of education (i.e. highest degree certification), tenure (as the number of years spent in the present organization) and employee discretion on perceived career prospects while controlling for specific individual and contextual characteristics.

Several important findings emerge from this research. First, the majority of our hypotheses are supported suggesting that education and tenure are important for team affiliation and promotions, while autonomy has a critical role when it comes to assessing employee perceived career advancement prospects. In the first part of the analysis I focus on the individual characteristics that determine team formation beyond employee performance. The prediction of the positive coefficient of both education and tenure from models 1 and 2 confirms, as expected by the employee learning theory, that a high

education level and a high tenure inside a company lead to increased probability of being part of a team. Managers may prefer to select team-members who are highly educated or have a large history and experience with the organization in order to be able to share their information and knowledge with other employees or newcomers.

In the second part of this research, I analyze which factors, individual or group characteristics, may affect perceived career advancement prospects. In a team setting, my research proposes that employee's level of education, tenure and autonomy- at both individual and team level- can influence promotions. Results offer support for all the hypotheses except hypothesis 2b and hypothesis 4a, suggesting that team affiliation, individual autonomy, higher education and team discretion in the form of team freedom over the choice of the group leader contribute to high career prospects as expected, while tenure and team decision over the division of tasks have no significant influence on perceived promotion opportunities. The implication regarding attaining further education is in line with findings from Arrow (1972), Spilerman & Lunde (1991) and Chao & Ngai (2001) which consider education credential as an important signal about employee level of competence.

Furthermore, when used simultaneously in the same regression, individual autonomy and team autonomy, the former tends to rule out the effect of team autonomy in the form of team members´ choices upon the division of tasks. The explanation could be that employees who work in a team perceive individual autonomy as a more powerful determinant of career advancement and consider discretion over the division of tasks as insignificant. On the other hand, autonomy to choose the team leader is found positive and significant even for employees who enjoy high individual discretion, signaling that potential own interests are at stake: regarding team leader position as career advancement people may value more their possibility to choose one person among themselves.

However, some limitations should be noted. First, this research is a cross-sectional analysis. It would be interesting to study if the findings are reliable if we conduct a time series analysis. The second limitation of this study is due to data availability: the survey does not offer information about actual promotions, the data presenting only employee perceptions on their career advancement prospects. For future research it would be interesting to measure actual promotions and compare the results with the findings corresponding to the perceived job opportunities. Another direction for future research would be to investigate the role of team affiliation as a moderator of the relationship between education level and career advancement. It may be that high education facilitates promotions as a signal for productivity but being part of a group can attenuate the negative influence of low education on promotions.

To conclude, the estimated results from this research shed light in understanding the strong relation between various employee characteristics, the job design and perceived job opportunities. Starting with a comprehensive analysis of the antecedents of team affiliation, this paper finds that being part of a team, having high education, and enjoying both individual autonomy and group discretion lead to the perception of higher career prospects. Limitations aside, the study does contribute to an understanding of how managers should allocate employees to teams (i.e. considering the benefits of learning and sharing) and once inside the group, which tools should they use in order to keep the workers motivated. Endowing employees with autonomy, at both individual and group level, is a signal of empowerment which elevates expectations while it brings a sense of control over one's work and even job title, in the case of team freedom of choice over who will lead the group.

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Appendix

Table 1A.Variable definition and structure in Chapter 1**:**

Variable Name	Definition	How it becomes operational	Expected effects
Age (agenormal)	The age of the respondent measured in years	Control variable with real values from 15 to 99 years. -uses variable hh2b from the survey	Controlling for age we can see how the dependent variable evolves - individual
Sex (newsex)	The gender of the respondent	Dummy variable with value 0 for woman and 1 for man. -uses variable hh2a from the survey	Controlling for sex we can see how the dependent variable evolves -individual
Autonomy: -Individual Autonomy (at2) -team-level autonomy (autoteam1)	-individual autonomy (at2) describes the extent to which the respondent has autonomy in decision-making about his own work: -at2 is an index that comprises three variables which the employee can control: his methods of work, the order of tasks and the speed of his work -autoteam1 describes whether or not the team can decide by itself the division of tasks	Moderator variables -with at2 is expected that if the employee can decide upon his methods of work, the order of tasks and the speed of work he will be more satisfied -at2 is a standardized index variable which represents the mean of three dummy variables: methods of work, the order of tasks and the speed of work. It uses variable q24a,b,c from the survey - autoteam1 uses variable q26b_1a from the survey	We expect that the more autonomy a worker or a team has in decision-making the stronger the relationship between the compensation type and job satisfaction.
Nationality (country)	The respondent country of origin	Dummy variables with values for the nationality of the respondent -uses variable country from the survey	Controlling for heterogeneity in nationality - contextual
Type of Industry (ind)	In which industry activates our respondent	Dummy variable for different industries -uses variable nace11 from the survey	Control variable - contextual
Job Tenure /experience (tenure)	Number of years a respondent has been employed in his/her present main job	Control variable with values in real years at the current company -uses variable q2d from the survey	Control variable - individual
Type of Compensation	The type of compensation that the employee receives	Independent variable with vales: -Individual performance pay (IPP): variable ef6b from the survey -Payment based on the overall performance of a group (TBR): variable ef6h from the survey -combined salary: IPP & TBR => uses variables ef6b and ef6h	Independent variable - IPP decrease job satisfaction - payment based on the overall performance of a group increase job satisfaction
Education (edu)	The highest level of education completed by the employee	Dummy variables for 7 different levels of education -uses variable isced from the survey	Control variable -individual
Task Interdependence (ta)	The pace of work of an employee depends on the work done by his colleagues	Moderator variable -dummy variable with value 1 if the pace of work of an employee depends on the work done by his colleagues and 0 otherwise -uses variable q21a from the survey	High task interdependence influences negatively employee satisfaction
Size of the organization (size)	Number of employees in the company	Dummy variables for 7 different sizes -uses question q6	Control variable - organizational
Salary	Average net monthly income	Dummy variable for 10 different income levels -uses question ef5 from the survey	Control variable - individual
Employee Satisfaction with Pay	Pay satisfaction of team members: "I am well paid for the work I do"	Categorical variable, which uses a scale from 1 to 5, 1 meaning that the employee strongly disagrees which this affirmation 2 that he or she disagrees, 3 neither agree nor disagree with the affirmation, 4 he or she agrees and 5 strongly agrees -uses variable q37b from the survey	Dependent variable

Table 2A. Variable definition and structure in Chapter 2**:**

Variable Name	Definition	How it becomes operational	Expected effects
Age	The age of the respondent measured in years	Control variable with real values from 15 to 99 years. -uses variable hh2b from the survey	Control variable , individual
Gender	The gender of the respondent	Dummy variable with value 0 for woman and 1 for man. -uses variable hh2a from the survey	Control variable, individual
Autonomy: -Individual Autonomy (indivauto) -team-level autonomy (ateam)	-indivauto is an index that comprises three variables which the employee can control: his methods of work, the order of tasks and the speed of his work -ateam describes whether or not the team can decide by itself the division of tasks	-indivauto is an index variable which represents the combination of three dummy variables: methods of work, the order of tasks and the speed of work. It uses variable q24a,b,c from the survey - ateam uses question q26b_1a from the survey: "Do the members of the team decide by themselves on the division of tasks?"	Independent variables with team autonomy moderator in H5 -We expect autonomy to increase assistance received in teams
Country	The country where the survey is taken	Dummy variables with values for the country of interview for the respondent -uses variable country from the survey	Control variable, contextual
Type of Industry (ind)	In which industry activates our respondent	Dummy variable for different industries -uses variable nace11 from the survey	Control variable, contextual
Job Tenure (tenure)	Number of years a respondent has been employed at his/her present company	Control variable with values in real years at the current company -uses variable q2d from the survey	Control variable, individual
Piece Rates (PR)	Piece rates or other productivity payments	Dummy variable with 1 for PR, 0 otherwise -uses ef6b from the survey	Independent variable - We expect to decrease the help received
Size of the organization (size)	Number of employees in the company	Dummy variables for 7 different sizes -uses variable q6	Control variable, organizational
Occupation	Job title	Dummy variable with for 10 different categories of occupation -uses variable isco from the survey	Control variable, individual
Employee Helping Behaviour	The amount of assistance received by team-members	Categorical variable -uses a 5-point Likert scale from 1= "strongly disagree" to 5 = "strongly agree" -uses variable q25a from the survey: "You can get assistance from colleagues if you ask for it." transformed so that value 5 represents help received almost always	Dependent variable

Table 3A.Variable definition and structure in Chapter 3**:**

Variable Name	Definition	How it becomes operational	Expected effects
Age	The age of the respondent measured in years	Control variable with real values from 15 to 99 years. -uses variable hh2b from the survey	Control variable , individual
Country	The country where the survey is taken	Dummy variables with values for the country of interview for the respondent -uses variable country from the survey	Control variable, contextual
Education	The highest level of education attainment of the employee	Dummy variable with values from 0 to 6 for the level of education. -uses variable isced from the survey	Control variable, individual and independent variable in H2a
Gender	The gender of the respondent	Dummy variable with value 0 for woman and 1 for man. -uses variable hh2a from the survey	Control variable, individual
Job Tenure (tenure)	Number of years a respondent has been employed at his/her present company	Control variable with values in real years at the current company -uses variable q2d from the survey	Control variable, individual and independent varible in H2b
Occupation	Job title	Dummy variable with for 10 different categories of occupation -uses variable isco from the survey	Control variable, individual
Size of the organization (size)	Number of employees in the company	Dummy variables for 7 different sizes -uses variable q6	Control variable, organizational
Type of Industry (ind)	In which industry activates our respondent	Dummy variable for different industries -uses variable nace11 from the survey	Control variable, contextual
Autonomy: -Individual Autonomy (indivauto) -team-level autonomy (ateam) - team-level autonomy (tl)	-indivauto is an index that comprises three variables which the employee can control: his methods of work, the order of tasks and the speed of his work -ateam describes whether or not the team can decide by itself the division of tasks -tl describes whether or not team-members can decide who will lead their team	-indivauto is an index variable which represents the combination of three dummy variables: methods of work, the order of tasks and the speed of work. It uses variable q24a,b,c from the survey - ateam uses question q26b_1a from the survey: “Do the members of the team decide by themselves on the division of tasks?” with possible answers Yes and No - tl uses the question q26b_1b from the survey: “Do the members of the team decide by themselves who will be head of the team? “with possible answers Yes and No	Independent variables -We expect autonomy to increase career advancement prospects
Team Participation	Shows whether or not employees work in teams	Dummy variable showing if employees work in teams or not -uses question q26b from the survey: “Does your job involve doing all or part of your work in a team?”	Independent variable

Career Advancement Prospects (CAP)	Posibility of promotion inside the organization	Categorical variable -uses a 5-point Likert scale from 1= "strongly disagree" to 5 = "strongly agree" -uses variable q37c from the survey: "My job offers good prospects for career advancement."	Dependent variable