COORDINATION AND UNIVERSITY QUALITY:
AN EMPIRICAL ANALYSIS AT THE REY JUAN CARLOS UNIVERSITY

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Key words

- Education
- Sharing of objectives
- Mutual respect
- Knowledge sharing
- Organizational practices
- Efficient communication mechanisms
- University results
1. Objectives

- To **proof** if the application of **coordination mechanisms** amongst team members at the University departments explains excellence in upper education systems

  The research should be **of interest for policy makers** in a framework of high competition where the search of excellence is a must
1. Why this research?

✓ The University systems are immersed in a process of deep transformation that affects all the different hierarchical levels (Brunner, 2011; De Pablos et al., 2012, Bermejo & de Pablos, 2013)
1. Why this research?

- It is important to
  - Improve teaching and learning
  - Deeply link university and society
  - Re-orient research
  - Optimise governance and financial mechanisms
  - Control results and learn from them
2. The proposal

Good organizational practices

Coordinating relationships

Satisfaction of the stakeholders
2. The proposal

✓ The importance of coordinating relationships and the dynamics of communication in organizations can explain best results.
Integration of tasks (Faraj & Xiao, 2006, De Pablos et al., 2013)

Good communication (Bong & Wong, 2012)

Respect for tacit knowledge (De Pablos et al., 2012, 2013)

Sharing objectives (Yang, 2008, Haider & De Pablos, 2013)
Source: adapted from Gittell (2010)
• **Task interdependence:** The universities need managing tasks in a shared way with different departments.

• **Uncertainty:** teaching and doing research present today a group of obstacles (Armbrust et al., 2010) that make flourish the uncertainty in the processes they operate.

• **Tacit knowledge:** teachers own tacit knowledge that often is difficult to make explicit
The importance of relational coordination in higher education

- Learning is a **social process**. An effective teaching-learning method has much to do with
  - The ability to properly coordinate different agents
  - Making people share ideas
  - The sharing and transfer of knowledge
  - The sharing of objectives.
  - Respecting one another
3. The empirical analysis
Rey Juan Carlos University

- The Rey Juan Carlos University is a public University with four campuses at Mostoles, Alcorcon, Vicalvaro, Fuenlabrada and another centre in Manuel Becerra. It was created in 1996 has the Latin motto “Non nova, sed nove” (“Not new things, but in a new way”). With among 33.000 students and teaching and research staff among 1700 people, it is the third biggest public university in the Community of Madrid (Academic Memory, 2010/2011)
- The University provides students around forty-three degrees, twenty-nine double degrees and fifty-three University masters.
- The University has a specific area for new technologies. The area of information technologies and communication of URJC manages everything concerning the Informatics and communications of the University. It promotes and coordinates activities of implementing global information technologies and communication according to its strategic plan, supporting the activities of teaching, management, research and services. Among it is functions figure:
  - Build relationships and promote collaboration channels.
  - Facilitate communication of members of the University through an adequate management of communications.
  - Establish the mechanism for the proper care of users.

- The Rey Juan Carlos is the newest university to analyze at this work. This University offers many media and great facilities, but later we will see if this really relates to improved relational coordination and if the slogan of the University (“Non nova, sed nove”) actually is true or, at least, lecturers feel this way.
4. Empirical analysis

Figure 2. The proposed model
• The database we have used comes from a survey performed in 2012 to 156 lecturers of University, coming from different areas of expertise: Sciences, Social Sciences, Humanities and Engineering.

• The survey is composed by aspects related to the Institutions (5 items) and 32 questions related to six communication and relation dimensions graded by using likert scales (1 to 5). Cronbach alpha has been used as the reliability standard, and shows the following percentages for each group of variables

1. Relationships and coordination with the team work: 0.876
2. Institutional Coordination: 0.854
3. Department coordination: 0.812
4. Information opportunity: 0.765
5. Hierarchical relationships: 0.743
6. Conflict resolution: 0.731
4. Empirical analysis: the survey

**P4. Communication mechanisms are:**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>1.</td>
<td>LECTURER’S RECRUITMENT</td>
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<td>2.</td>
<td>LECTURER’S EVALUATION</td>
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<td>3.</td>
<td>LECTURER’S REWARDS</td>
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<td>4.</td>
<td>PROACTIVE CONFLICT RESOLUTION</td>
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<td>5.</td>
<td>LECTURER’S TRAINING</td>
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<td>6.</td>
<td>DESIGN OF WORK PROFILES ORIENTED TO OBJECTIVES</td>
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<td>7.</td>
<td>LECTURER’S MOBILITY</td>
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<td>8.</td>
<td>THE SHARING OF INFORMATION</td>
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<td>9.</td>
<td>THE SHARING OF INFORMATION WITH EXTERNAL AGENTS</td>
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**Communication and relational dimensions:**

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<table>
<thead>
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<tbody>
<tr>
<td>P5.</td>
<td>INFORMATION</td>
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<td>P6.</td>
<td>COMMUNICATION</td>
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<td>P7.</td>
<td>PROBLEM SOLVING PROFILES</td>
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<td>P8.</td>
<td>SHARED KNOWLEDGE</td>
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<td>P9.</td>
<td>MUTUAL RESPECT</td>
</tr>
<tr>
<td>P10.</td>
<td>SHARED GOALS</td>
</tr>
</tbody>
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Table 1. Detail of the survey in relation to relational coordination
3. Empirical analysis

- **Factor analysis**: To identify the factors from the existent inter-relations amongst different variables

- **SPSS version 15.0**
4. Results. Perception of quality at the URJC

- Increased
- Maintained
- Decreased

Percent (%)
## 4. Results. Factor analysis results

<table>
<thead>
<tr>
<th>Factor</th>
<th>Explained variance</th>
<th>Eigenvalue</th>
<th>Items</th>
<th>Loading</th>
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</thead>
<tbody>
<tr>
<td>F1</td>
<td>36.96</td>
<td>9.60</td>
<td>P8_1</td>
<td>0.646</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>P8_2</td>
<td>0.818</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>P9_1</td>
<td>0.551</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>P9_2</td>
<td>0.776</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>P10_1</td>
<td>0.558</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>P10_2</td>
<td>0.710</td>
</tr>
<tr>
<td>F2</td>
<td>12.26</td>
<td>3.19</td>
<td>P8_5</td>
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<td></td>
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<td></td>
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<td></td>
<td>P9_5</td>
<td>0.770</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>P10_4</td>
<td>0.680</td>
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<tr>
<td></td>
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<td>P10_5</td>
<td>0.840</td>
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<tr>
<td>F3</td>
<td>9.54</td>
<td>2.48</td>
<td>P5_2</td>
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<td>P6_2</td>
<td>0.800</td>
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<td></td>
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<td></td>
<td>P6_3</td>
<td>0.610</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>P7_4</td>
<td>0.612</td>
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<td>P8_4</td>
<td>0.716</td>
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<td>P7_2</td>
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<td>P7_5</td>
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<tr>
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<td></td>
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<td>P6_1</td>
<td>0.864</td>
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</tbody>
</table>
Factor 1 explains a 36.96% of the variance and is composed by 6 variables; the first three (P8_4; P8_2; P9_1) are related to the relational dimensions dealing with team work (shared goals, shared knowledge y mutual respect). Afterwards 3 variables related to frequent communication (P9_2, P10_1 and P10_2). This is Factor 1 of relational coordination inside work team and this group receives environmental feed-back
4. Results. Factor 1

Figure 2. Distribution of variables from Factor 1
4. Results. Factor 2. Institutional coordination

Factor 2, composed by five variables (P10_5, 4; P9_5, 4 and P8_5) explains a 12.26 of the existent variability in the organizational structure. The five variables refer to the relational dimension (share goals, share knowledge y mutual respect) with the human resources at the Institution. Therefore we name it Factor 2 as Institutional Coordination.
4. Results. Factor 2

Figure 3. Distribution of variables from Factor 2

Mean importance rating (1=not important, 5=extremely important)
4. Results. Factor 3. Department coordination

- **Factor 3** explains a 9.54% of the variance, and it is composed by six variables (P8_4; P7_4 y P6_3,2, P5_3,2) related to the relational dimension (share goals, share knowledge and mutual respect) with the Department management. Therefore we name it Factor 3 as Department Coordination.
4. Results. Factor 3

Figure 4. Distribution of variables from Factor 3
4. Results. Factorial analysis

• **Factor 4** explains an 6.62% of the variability and it is related to timely communication and problem-solving communication (variables P7_5, 2 and 1). The results of these variables are partly explained by the high lecturer’s self-resolution.
4. Results. Information opportunity

Figure 5. Distribution of variables from Factor 4
4. Results. Factorial analysis

- **Factor 5** is built from four variables (P10_3, P9_3, P8_3 and P7_3) related to sharing of goals and knowledge with the boss in the process. We name it Factor 5 of relational coordination with the supervisor and it explains a 5.54% of the variance. Figure 6 shows it.
4. Results. Hierarchical relationships

Figure 6. Distribution of variables from Factor 5
4. Results. Factorial analysis

- **Factor 6**, explains a 4.9% of the variance and is composed by 2 profiles related to conflict resolution (P6_1; P5_1). The lecturer has been excluded from this factor since it has considered in the previous factor as self-conflict solver.
4. Results. Conflict resolution

Figure 7. Distribution of variables from Factor 6
4. Results. Factorial analysis

- **The three first factors explain a 61,76%** of the variance and they indicate in the first place that the significant differences in the organizational structure come from the relationships in the work group. In the second place they are explained by the relationships of lecturers with the Institution and finally with the Department.

- **The rest of factors explain a 17,06%** of the variance and are linked to the timely communication, supervisor coordination and the definition of profiles solving conflicts in the Institution.
5. Conclusions

- According to the results obtained in the analysis, we can affirm,
  - **An increase in the level of collaboration** amongst departments is required.
  - **Faculty staff should promote knowledge sharing.** Efficiency in the decision making can only be reached if the decisions of the decision makers, who are in different decision points, are coordinated in order to achieve the organizational goals. New models of collaboration to promote co-creation of value should be considered.
  - The dimensions of relational coordination have shown that a 53.1% of the variability between faculties is explained by the relationships of lecturers with the Institution and Department.
  - The factors analyzed show that the **organizational structure of the institution highly** agrees.
  - **In a conflict the relational coordination takes place in the work group** (they follow win-to-win strategies)
  - The President or the Dean, the ones who solve the conflicts, **in many cases the department does not know about lecturers work and conflicts...**
  - We propose to work in the **improvement of the quality of the information** that the lecturers receive.
  - For obtaining best results, **Universities must change their organizational routines.**
  - The role of Departments should be redesigned. **Lecturers trust more in the group that in the department or the Institution.**
  - This study **means a point of start to explain** the importance of personal interrelations in final organizational performance.
5. Discussion and implications
6. Limitations

- The research is a cross-sectional one
- Only applied to lecturers
- Only applied to one University