

## **Intrinsic vs. Extrinsic Motivators on Creative Collaboration: The Effect of Sharing Rewards**

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### **Extended Abstract**

As well expressed by Scott (2010), the notion of creativity is inevitably caught between two polarities, one psychological (individual creativity), the other sociological (collective creativity). On the one side, creativity resides in the personal endowments and capacities of individuals: some have the native talent and/or acquired know-how for certain kinds of creative acts; some have little or none. On the other side, creativity is also embedded in concrete organizational contexts that shape its motions and objectives in many different ways. Two important variables have been shown to impact on the creative processes within different organizational modes: financial incentives and peer effects.

About the former, Charness & Grieco (2018) propose to undergraduate students in Economics, at an individual level, two kinds of creative assignments: “*close*” and “*open*” creativity. In the former case, ex-ante goals and constraints are imposed, as is usually the case for most of the economically relevant creative activity (such as finding a way to decrease the size of a computer or developing a new drug for a specific purpose). In the latter case, no restrictions apply, so “thinking outside the box” should be more natural. Participants are randomly given one of three creative assignments – mathematical, graphical and verbal – under tournament incentives on the specific assignment, with monetary rewards to the winners only in half of the experimental sessions. Charness & Grieco (2018) find that financial incentives have a positive impact on creativity, but only in the case of “close” creativity, i.e. when there are some constraints to the task that a subject has to accomplish.

In this paper, we build on the same “close” creativity assignments of Charness & Grieco (2018) and analyze – with undergraduate students in Economics (in the lab) and with creative entrepreneurs (in the field) – the interplay between monetary incentives and within-group cooperation vs. within-group competition in three types of “creative” tasks – mathematical, graphical and verbal.

More precisely: 120 undergraduate students in Economics of University of Strasbourg participated in the lab experiments in 2015-2016, and 120 experts in creativity (professionals, entrepreneurs) operating in the region of Strasbourg participated in the corresponding lab-in-the-field experiments, during two major events organized in Strasbourg (Ecole d’Automne 2015, Tango & Scan 2016). We have four treatments (30 students and 30 entrepreneurs for each treatment): “Individual (Control)”, “Group with no monetary incentives to either

cooperation and completion”, “Group with monetary incentives to cooperation”, “Group with monetary incentives to cooperation and competition”.

We find more creativity in cooperative groups than (in competitive groups and) individually *only* when no monetary incentives are provided to group cooperation (sharing ideas) in the creative assignment.

Therefore, while the results of Charness & Grieco (2018) show a positive interplay between monetary incentives (**extrinsic individual motivation**) and “close” creativity at the individual level, we provide evidence of a negative interplay between monetary incentives and “close” creativity at the group level (**intrinsic group motivation**; see Festré & Garrouste 2014).

Furthermore, the latter effect is found more in the experimental sessions with creative entrepreneurs than in those with undergraduate students.

Finally, psychological factors (risk attitudes) and geographical factors (cultural association, openness to others, cultural association) usually found to stimulate creativity only impact on the creativity produced in the laboratory experiments by undergraduate students: for creative entrepreneurs, we only detect a treatment effect. We provide an interpretation to this result: being creative entrepreneurs already “creative” due to their professional activity, what matters for their (additional) creativity is only the “right” organizational mode, i.e. the one boosting their intrinsic motivation to be creative. And we find this organizational mode to be the one that allows them to accomplish their own individual creative task by cooperating in groups (i.e., sharing ideas) with no monetary incentives to ideas sharing.

## References

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