DEVELOPMENT OF COMPETITIVE BALANCE AT OLYMPIC WINTER GAMES

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Background

The medal market of the Olympic Winter Games grew 87% between Calgary 1988 and Vancouver 2010, due the new sports, disciplines and competitions in the Olympic program. Adding a sport increases its attention from media, spectators and competitors. The competitors in these sports are more likely to increase their effort, because value and reward, and the quality of the contest raises. Therefore, the incentives for competitors are affected by including a sport in the Olympic program. In this study paper, we compare the competitive balance of new and well established sports in the Olympic program.

Objectives

This study aims at describing the changes in the competitive balance in the sports of the Olympic Winter Games between 1988 and 2010. It is assumed that competitive balance in sports newly included in the Olympic program differs from traditional sports. That means, traditional sports are characterized by no trend in competitive balance, while newly included sport have a decreasing competitive balance over time.

Method

The development of the competitive balance is analyzed using the measurement of inequality in medal distribution at Olympic Winter Games. If inequality of medal distribution within a sport is low, competitive balance is high and vice versa.
Researchers use the Gini coefficient or standard deviation to examine the competitive balance in sports (Humphreys 2002; Utt & Fort 2002). We define the inequality index, following the technical criteria of Coulter (1989). Therefore, the Hoover-index is applied as a coefficient of distribution of inequality. It is conceptually simpler than the Gini coefficient (which incorporates also concentration) and meanwhile similar to the standard deviation. The index measures the inequality in medal distribution between nations contesting medals. The development of inequality in winter sports making part of the Olympic program since 1988 are compared to the ones added between 1988 and 1998. The trend of inequality is evaluated by a regression analysis. The data base of the International Olympic Committee (IOC) is used to extract the medal data from 1988 till 2010.

Results

The level of inequality values in traditional sports is higher than in newly added once. The competitive balance of sports newly included in the Olympic program is higher from the well established ones.
In traditional sports, the Hoover-index shows no significant trend in inequality of medal distribution in alpine skiing, biathlon, bobsleigh, cross country skiing, figure skating, ice hockey, luge, nordic combined and ski jumping. A strong variation of inequality is observed only in speed skating.
The new sports, like short track and curling show a significant increase of inequality, while freestyle skiing and snowboarding don't.

Conclusion

The results confirm the first hypothesis: competitive balance in sports newly included in the Olympic program is higher than in traditional sports. Furthermore, the assumption about a trend in the competitive balance of newly added sports couldn't be rejected.
Several factors influence the evolution of the competitive balance: number of contestable medals and contesting nations, effort of contestants, IOC regulation and quota, innovations in performance, etc. Except for speed skating, the results are reasonable due to the particularity of the medal market growth during the period. The number of contestable Olympic medals in freestyle skiing increased since 1992 plus 200% (from 6 to 18), and in snowboarding since 1998 plus 50% (from 12 to 18). The increase of inequality in these sports is probably perturbed by the increase of contestable medals. Further research is needed to enlighten the development of the competitive balance in the case of speed skating.
Furthermore we assume, that contest theory could partially explain the difference of competitive balance in new sports and traditional sports. According to this theory, competitors are maximizing their probability of success, and their behavior is guided by incentives (Szymanski 2003). These incentives are: number of contestant, value of the contest, marginal cost of effort and quality of the contest (Downward, Dowson & Dejonghe 2009). We assume, that the change from a non-Olympic to an Olympic sport affects these incentives, and therefore influences competitors behavior. It results in an increase of the marginal cost of competitors' effort. Thus, the contest becomes less balanced because of the inequality in available resources of the competitors (heterogeneity in talent and economic endowments). More able competitors are more likely to win contests (Downward, Dowson & Dejonghe 2009; Szymanski 2003). Therefore we argue, that contest theory can be applied to explain why the competitive balance in new Olympic sports should decrease over time.
The explanatory potential of contest theory should be strengthened by further studies.

References

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