

Editorial Comments:

I considered the article and reviews.

I have a remark to **Corollary 1**. See file "remark.pdf"

Author's Feedback:

Thank you very mach. It is very interesting.

Consider the following statement: If $X \subset R^m$ is compact, $m > 1$ and $F : X \Rightarrow R^n$ is a strongly injective continuous multifunction with compact and convex values, then F is single-valued function and X is subset of R .

It is not true. Why? I will give you an example.

New text:

Example 1. Let $X = [0,1]^2$ and let $F : X \Rightarrow R^3$ be a multifunction define by $F(x_1, x_2) = \{(x_1, x_2, t) \in R^3 \mid (x_1, x_2) \in X, 0 \leq t \leq 1\}$. It is easy to prove that $X \subset R^2$ is compact, $F(X) = [0,1]^3 \subset R^3$ and F is a strongly injective continuous multifunction with compact and convex values. Let define f_1 as in Theorem 1(a) and f_2 as in Theorem 1(b).

For Theorem 1(a) we obtain $m(x_1, x_2) = (x_1, x_2, 1)$ and $m(x_1, x_2) \in F(x_1, x_2)$ for all $(x_1, x_2) \in X$. As a result we have that $f_1 = m$ is homeomorphism and it is an efficient continuous selection for F .

For Theorem 1(b) we get that $v(1,1,1) \in F(X)$ is the unique ideal point for S . In this example each set $F(x_1, x_2)$ has the unique ideal point $(x_1, x_2, 1)$ for all $(x_1, x_2) \in X$. This means that $f_1 = f_2$.

We also find that:

$$(1) \text{ Eff}(X, F) = \{((x, x), (x_1, x_2, 1)) \in R^5 \mid (x_1, x_2) \in X\}.$$

$$(2) \text{ PO}(X, F) = ((1,1), (1,1,1)) \in R^5.$$

Note that if $X \subset R^m$ is compact, $F : X \Rightarrow R^n$ is a strongly injective continuous multifunction with compact and convex values, $F(x)$ has the unique ideal point for all $x \in X$, define f_1 as in Theorem 1(a) and f_2 as in Theorem 1(b), then $f_1 = f_2$.