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## RESEARCH ARTICLE

### ANALYSIS OF TACTICAL VARIANTS IN MEN'S AND WOMEN'S TENNIS DOUBLES ON THE INTERNATIONAL LEVEL

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#### ABSTRACT

There is no previous research in tennis doubles tactics and efficiency of tactics. There are several tactical variants for the serving team in tennis doubles; however the classical formation is mostly used. Other tactical variants are Australian formation and I-formation. Our aim was to find, how often and how effectively are these tactical variants used in men's and women's tennis doubles at the international level. We observed 22 men's matches and 24 women's matches on the ITF tournaments (International tennis federation). Every point that was played was marked. The observers wrote down the used tactical variant of each point and its efficiency. The classical formation dominates in men's and women's doubles. Men sometimes used the I-formation. Women used very rarely the Australian formation. In men's doubles, the I-formation was used more when serving from the ad-court (mostly at score 40:30), and with higher efficiency. I-formation reached higher efficiency than classical formation. We recommend using the I-formation more often in men's doubles. I-formation and returning against I-formation are playing activities, that should be in good control by players and the players should practice these actions.

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#### INTRODUCTION

Tennis doubles are important for tennis players. In team competitions, it is usually the doubles, which determines the overall winner. According to Mecir and Nakladal (1995) the doubles matches in practice and in tournaments are important for elite players. Kocib and Matejka (2008) say, players can learn different style of play in doubles, which is important. The players are forced to use their net skills i.e. volley and overheads, they have to react quickly during the net play and improve their stroke accuracy. Because of 4 players on the court at the same time, there are more tactical variants and players have to adjust their moves on the court, their stroke techniques and tactics in the match. In doubles, the players improve their perception skills as they have to watch the ball, the opponents and the partner's position (Crespo & Miley, 2002; Kocib and Matejka, 2008). Scoring in doubles is similar to the one in singles. However, on the international level are the doubles played with "No-Ad" scoring (if the score comes to "deuce" in the game, the following point determines the game winner, and the receiving team may choose which side they will receive). And the final set is played as a "Match Tie-break" till 10 points.

In doubles the stroke accuracy is very important. In spite of the court is wider for doubles, two players on each side mean less space where to hit the ball. In singles matches, it is the player's move that is very important, and we can see aggressive ball hitting from the baseline. It is not necessary to be good at serve-volley strategy (Crespo & Miley, 2002). Cayer (2004) says that the doubles partners need to know each other how do they play and minimize their weaknesses. The doubles tactics is more complicated than in the singles. If we want to hit the ball, we have to consider the position of our partner and opponents and we have to react according to theirs acting. Another important difference from singles is that beside individual skills, the cooperation between the players is crucial and the communication between the partners is important too (Kocib and Matejka, 2008). In doubles matches, the strokes, especially the return strokes, are supposed to be played very low above the net (accurately or aggressively) and the ball accuracy and placement is important (Hohm, 1982). There are four tactical variants of serving team position before the serve is struck (Cayer, 2004; Kocib and Matejka, 2008; Severa et al., 1993; Safarik, 1979). Figure 1 shows the *classical formation* for serving team. Players' positions are marked with the circles. There is *Australian formation* on figure 2. The difference from the classical formation is that server's partner is standing on the same side of their half of the court. After the serve, the server has to move on the other side of their court to cover the long line return.

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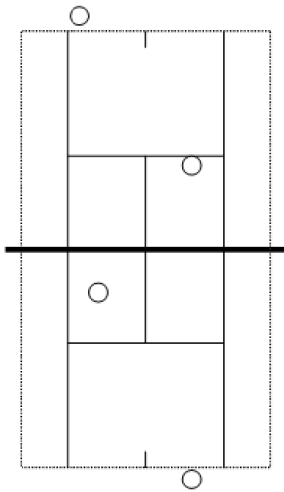


Figure 1. Classical formation

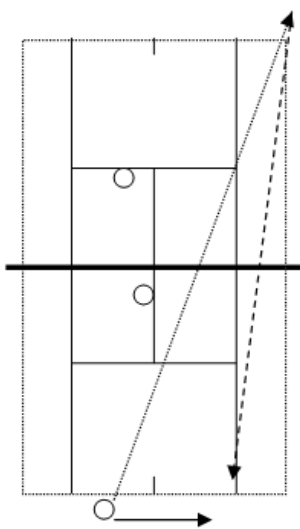


Figure 2. Australian formation

*I-formation* (Figure 3) is another tactical variant for the serving team. The server is serving from the middle of the court near the center service mark to be able to move on both sides of the court. His partner is crouched (not to be hit by the serve) in the middle of the court near center service line, 2-3 meters in front of service line (Carboch, 2009; Kocib and Matejka, 2008).

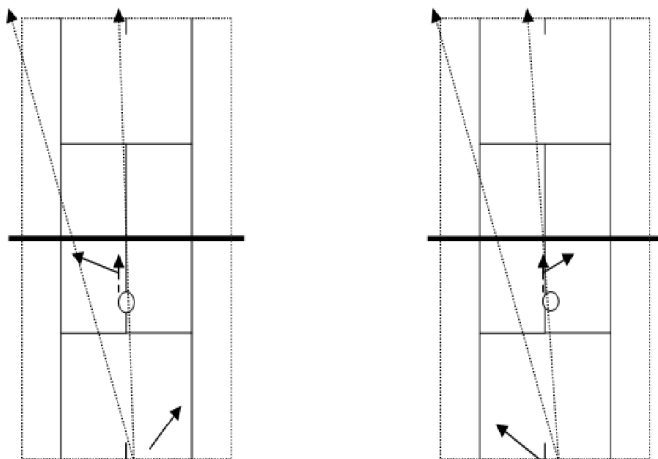


Figure 3. "I-formation" when serving from the right side (deuce court)

I-formation may be used during every serve. The players have to say each other, what will be the serve placement (e.g. wide or „T-line“) and who will cover (move to) left and right part of the court. The receiver is under pressure, because he does not know, which way the server’s partner will move. This I-formation is forcing the receiving player to return the ball down the line. I-formation should be used when receiving team has strong crosscourt return (Cayer, 2004). The serving teams are usually using this I-formation during the “big points”. After the serve, the players should change their positions in 70 % cases of I-formation to avoid the crosscourt return and to avoid possible poaching of receiver’s partner. In the rest of the cases the serving team should not change the positions to keep the receiver unsure, where to return (Cayer, 2004). The fourth tactical variant of serving team is that both players are at the baseline. This variant isn’t used at professional level at all. Our aim was to find, how often and how effectively are these tactical variants used in the men’s and women’s tennis doubles at the international level.

**MATERIALS AND METHODS**

We observed all doubles matches (n=46) at two men’s and women’s ITF (International tennis federation) tournaments in 2013. Those were “Futures” category tournaments with the prize money of 15.000 USD, both for the men and women. All matches were played on hard courts. We observed 22 men’s matches of doubles and 24 women’s matches of doubles. Only fully completed matches were considered into the results. We watched three tactical variants of the serving team: 1) Classical formation; 2) Australian formation; 3) I-Formation. Consequently we observed the efficiency of the each tactical variant to win the point. We marked every point that had been played. This was a direct observation and we marked to the prepared sheet which formation was used by the serving team, who won the point (if the serving or receiving team) and what was the score. At the deuce score it was marked from which side the team was serving too. Every marker was instructed, which tactical variant we evaluate and how to mark them. There was one marker per doubles match (if e.g. three doubles matches were played at the same time, there were three markers). Every match was assigned by a licensed umpire, who determined the point winner and announced the score after each point. After this, the marker wrote down who won the point and which formation was used.

**RESULTS**

*Men*

There was played altogether 2360 points (413 games, 47 sets) in the men’s matches. Mostly the classical formation was used – in 97% cases (2295). I-formation was used in 3% of cases (65). Australian formation was not used. We will now analyze the classical formation and I-formation. Classical formation efficiency of serving teams was 63 %. Classical formation efficiency of the winning teams was 71%; and 55% of the losing teams. Overall I-formation efficiency was 77% (50 out of 65). I-formation efficiency of the winning teams was 79% (31 out of 39); and 73% (19 out of 26) of the losing teams. When serving from the right side (deuce court), I-formation was used 25× with the efficiency of 64 %. However when serving form the left side (ad-court) I-formation was used 40×

Table 1. I-formations usage and efficiency during different game score

Equal score							
Score	0:0	15:15	30:30	40:40	Tie-break*		
Efficiency	63%	50%	75%	86%	-		
Win	5	1	3	6	0		
Lost	3	1	1	1	0		
Overall usage	12%	3%	6%	11%	0%		
Leading in game							
Score	15:0	30:0	40:0	30:15	40:15	40:30	Tie-break*
Efficiency	67%	67%	100%	100%	50%	70%	100%
Win	4	2	3	7	1	7	2
Lost	2	1	0	0	1	3	0
Overall usage	9%	5%	5%	11%	3%	15%	3%
Losing in game							
Score	0:15	0:30	0:40	15:30	15:40	30:40	Tie-break*
Efficiency	-	0%	100%	100%	100%	75%	100%
Win	0	0	1	3	1	3	1
Lost	0	1	0	0	0	1	0
Overall usage	0%	2%	2%	5%	2%	6%	2%

\* I-formation was used three times in tie-break and the score was 3:0, 1:6 a 6:2

with the efficiency of 85%, which is interesting. I-formations usage and efficiency during different game score is showed in table 1. 51% of I-formations were used when the team was leading in the game, mostly at the score 40:30 and 30:15 (serving from ad-court). 32% of I-formations were used at the equal score in the game and 17 % of I-formations were used when the team was losing in the game.

### Women

We observed 24 doubles matches of women. They played 2572 points (452 games, 54 sets). Similar to the men, the classical formation was mostly used (or only used) – in 99% of cases (2566). Australian formations was observed only 6 times (<1%). There was no other formation used. Classical formation efficiency of serving teams was 58 %. Classical formation efficiency of the winning teams was 65%; and 50% of the losing teams. Australian formation efficiency was 67% (4 out of 6). For the winning teams was the efficiency 75% and for the losing teams it was 50% efficiency. However, we can't really compare these numbers as we do not have enough data. Australian formation was used while serving from the ad-court only, as well as it was when the team was leading in the game except one deuce score (see table 2 for details).

Table 2. Game score and Australian formation usage

Game score	40:0	30:15	40:30	40:40
Efficiency	50%	100%	50%	100%
Win	1*	1	1	1
Lost	1	0	1*	0
Overall usage	33%	17%	33%	17%

\* Match losers.

## DISCUSSION

Cooperation and communication between the partners in doubles is important, of course, next to the individual skills. I-formation needs to be practiced in training first and then can be successfully used in matches. Both players using I-formation must exactly know, when and where to move or which area they have to cover. In tough doubles matches it is the I-formation that can determine the winner. Net play is crucial in doubles. The classical formation prevails in men's and women's doubles. I-formation was used only in 3% of all points in men's doubles and this number is 10% smaller than

in study of Carboch (2009), however less matches had been observed there. He also says that women used the I-formation in 1,5% of all points. In our study, the women rarely used only the Australian formation <1%. That shows us the difference between the men's and women's doubles. Women are using less tactical variants. Cayer (2004) says the Australian formation was replaced by the modern I-formation. According to Carboch *et al.* (2013), the men's doubles used to be similar to the women's doubles in the past, but there is a big difference between them nowadays. Black a Van de Braam (2012) say, strokes and the ball are faster during the rally and because of that is the net play more difficult. We can see more ground strokes from the baseline in doubles matches, especially in women's doubles, but the net play is still important. However, in men's doubles we can see more net play and usually it is the third shot (net approach volley) of the rally, which is, beside the serve and return, the crucial shot for the rest of the rally (Carboch *et al.*, 2013).

Interestingly, the I-formation was used more when serving from the ad-court (62%). Also the efficiency was higher from the ad-court too (85% to 64%). It means that it is easier for the serving team, to use the I-formations when serving from the ad-court. I-formation was mostly used, when the players were leading in the game and, mostly, when the score was 30:15 or 40:30 (both serving from the ad-court). When the players were losing in the game, I-formation was usually used at the score 30:40 (which is very important point) and the serving team had had some problems to win the game, so they used the I-formation. Another common score, when the I-formation was used, was deuce (40:40) and at the first point of the game (0:0). I-formation forces the receiver to return down the line instead of crosscourt. Returning down the line is more difficult, especially backhand return down the line is difficult stroke. And next, the receiver doesn't know, where will the players of serving team move, which keeps him unsure and under some pressure. These may be the reasons of higher efficiency of the I-formation. Women used the Australian formation when they were leading in the game. But we can't compare it with men, as we would need more points where the Australian formation would be used. The serving team had higher efficiency using the I-formation, then classical formation. Even the teams that lost the matches their I-formation efficiency was higher than classical formation of the winning team. We suggest using the I-formation more often in

men's doubles. There is no previous research in tactics efficiency in tennis doubles. In spite of some limitation in this study, i.e. sample size, low amount of Australian formations or I-formations and receiving team strategy was not considered; we would like to bring new information that may be useful for players and coaches. We showed that some tactical variants should be used more often. We focused on ITF level tournaments. However, further research is required to confirm our findings. Future research should analyze doubles tactics in ATP (Association of Tennis Professionals) and WTA (Women Tennis Association) tournaments.

### Conclusion

Our aim was to find, how often and how effectively are different tactical variants used in the men's and women's tennis doubles at the international level. We can conclude some findings, but the limitations mentioned above have to be considered. Classical formation prevails in doubles matches. Men sometimes used the I-formation. Women used a very little of Australian formation and I-formation was not used at all. I-formation had higher efficiency than classical formation in men's doubles. We suggest the I-formation to be used more often in men's doubles. Higher efficiency of I-formation was reached when the players were serving from the ad-court. I-formations were usually used at the end of the games. The receiving players are requested to be able to return against the I-formation of the serving team, especially when receiving on the ad-court. Using I-formation and returning against I-formation are playing activities which should be in good control by the players and the players should practice these actions.

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