Role of Tacit Knowledge in Expertise

What differentiates between Sebastian Vettel (currently World no. 1 in F1) and an amateur street car racer? What makes one earn more than a $25m a year while the other earns hardly enough to sustain himself? Clearly one is an expert in driving and the other is not.

An expert is someone who performs better than the rest and can still make it look like a cake walk. They have a tendency to perform seeming difficult tasks with no or very little efforts which otherwise normal people are not able to do. The reason for this difference has been the subject for a number of researches and it has been found that they do it without actually thinking about it. Particularly, like in a sport like racing, a driver doesn't really think about what should be done explicitly. You don't get so much of time when you are driver at over 300Kmph. So is it that their brains are somehow wired differently than others? That they can think faster than others? In fact it has been found that when asked to think aloud, even 'experts' tend to think like a normal person. They even have the same basic ideas and a similar thought process as a normal person does. Further studies have shown that people perform better in a state of unconsciousness. For example, musicians have been observed to perform better when they are high rather than when they are sober. All these studies have led many to believe that implicit learning is more robust than explicit learning. This learning can be in many forms. It can be a result of some old incident we have witnessed. We may not remember the exact incident or in fact the whole incident altogether, but in the unconscious, it stays and has lasting effects. Not all incidents stay, but those which do, play a major role in the way we think and respond. Even in people with mental disorders like amnesia, it has been found that many incidents stay even though they won't be there in the conscious memory. Now the question here is that if implicit learning is so much better than explicit learning, then should we just stop learning altogether and hope that we will someday get a shower of wisdom from heavens and will know everything after that? Or is it a result of prolonged efforts and practice? What I feel is implicit knowledge is a consequence of a more explicit learning. Initially, everyone needs to learn the rules of game in the same way. Maths is all about addition and subtraction till the time we can do these things in our brain fast enough. Training is the time when we feed our brain with information that can be stored in the unconscious so that we act accordingly when it is required. Training gradually turns to tacit knowledge. Slowly with time, we start seeing things before they happen, for example, a good batsman in cricket can estimate where the ball will land and how it will turn before it actually does. It gets interesting when the same batsman is asked why and how he thought before playing that shot. It has been found that people generally reason after they have been asked for. The reasons are thought after the action is done. When a squash player was asked to coach younger players a particular shot, he asked them to turn their wrists but he actually turned his wrist after he played the shot. So he inadvertently misguided the newer players.

So expertise is something which is learnt gradually as things get fed into our unconscious mind with practice. It is not something which can be learnt in day. The basic technique may be the same, but what really makes the difference is the unconscious. It is this tacit knowledge which resides in our mind due to which we make decisions and estimates. And the probability of these estimates and decisions becoming correct increases as the experience increases.